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College of Business Administration

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Investments of Life Insurance Companies

1930 - 1946

by

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(B.S. in B.A. Boston University 1935)

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the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION



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the requirements for the degree of

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Investments of Life Insurance Companies,

1930 - 1944

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I. Introduction

A. General Comments

Since 1930, investment officers of life insurance have been harassed by a series of staggering problems which have been entirely new and strange to them. Early in the tribulation came the big bond defaults, particularly in the case of the INTRODUCTION the end of 1935, defaulted bonds in the portfolio of the Metropolitan Life Insurance Company totaled almost fifty million dollars, four-fifths of them being railroad bonds. (1) Just as the difficulties caused by the defaults were partially blotted away, life insurance companies found themselves welcomed in a buyers' market for credit which has been continuing for many years, and during which interest rates have fallen to historic levels. Concurrently with the difficulties caused by defaulted interest rates, insurance companies found themselves hit by another depression affecting the value of their security holdings. (Metropolitan's 1936 statement shows a loss of \$178,886,000 at the end of 1935 of \$114,000,000, of which \$100,000,000 involved railroad bonds.) (2) Although the problems in value were tentative at first, they were not of the nature that concerned were disposed of, they remained, and the Metropolitan did not have the advantage of being the largest

(1) Margolis (anon), The Metropolitan Life—The Viking Press, New York, 1947. Page 100.

(2) Ibid. pp. 378-379.

I. Introduction

A. General Comments

Since 1930, investment officers of life insurance have been harassed by a series of staggering problems which have been entirely new and strange to them. Early in the thirties came the tidal wave of bond defaults, particularly in the case of the railroads. (At the end of 1935, defaulted bonds in the portfolio of the Metropolitan Life Insurance Company totaled almost fifty million dollars, four-fifths of them being railroad bonds.) (1) Just as the difficulties caused by the defaults were partially cleared away, life insurance companies found themselves wallowing in a buyers' market for credit which has been continuing for twelve years, and during which interest rates have fallen off sharply. Concurrently with the difficulties caused by declining interest rates, insurance companies found themselves plagued by another depression aftermath-the enforced write-down of security holdings. (Metropolitan's gross write-down totaled \$173,884,000 at the end of 1942; of this amount \$165,474,000, involved railroad bonds.) (2) Although such declines in value were tentative or paper losses only until the securities concerned were disposed of, many companies, unlike the Metropolitan did not have the courage to hold the depreciated

(1) Marquis James, The Metropolitan Life-The Viking Press, New York, 1947. Page 288.

(2) Ibid. pp. 375-377.

bonds until improved market and business conditions had driven their values up to par, and, by selling, assumed an actual loss on the items disposed of.

Furthermore, the purchase by United States life insurance companies of huge quantities of United States Government Bonds issued to finance World War II brought into their investment portfolios low-yield securities which, at the end of 1945, amounted to over fifty per cent of their total holdings. Finally, to aggravate still further investment problems of these institutions, their assets, as well as their policy reserves, more than doubled during the period 1930-1945, thereby making necessary the intensification of the search for profitable and sound investments for the rapidly swelling funds held by these companies. Of all the factors mentioned above it appears that the primary and basic problem which has influenced and controlled, directly and indirectly, investment policies of life insurance companies for the last fifteen years has been the declining rate of interest. Moreover most institutional investors will agree with Mr. Arthur B. Wood, President and Managing Director of the Sun Life Assurance Company of Canada, who stated in his 1945 report to his company's policyholders that the problem of declining interest rates is the "greatest single issue facing the Life Assurance Companies today." (1)

(1) Arthur B. Wood, Sun Life Reports to You 1945, Page 13.

Mr. Wood went on to say:

The future course of interest rates is a matter for conjecture, but the indications are that we are faced with a long period of low interest rates. Life Assurance Companies must always be prepared to adapt their practices to conform with changing conditions, and with the prospect of the continuance of low interest rates for an indefinite period it is sound policy to build up substantial surplus and contingency funds. (1)

What a contrast there is between the interest situation today and that of thirty-five years ago when Mr. Lawrence Chamberlain predicted that,

For the indefinite future a return averaging at least 4% will probably be demanded of money to the loan of which there is attached a commercial risk! (2)

To be sure, there is no unanimity of opinion today among economists, bankers, and investment specialists as to just where we stand on the matter of bond prices, nor on what the future holds as to bond yields. Speaking at the 16th Annual Conference of the Harvard Business School Alumni Association on June 8, 1946, Mr. John H. Williams, Vice President of the Federal Reserve Bank of New York and Dean of the Harvard Graduate School of Public Administration said that he could see nothing on the immediate horizon to cause a reversal of the downward trend of interest rates, and that a

(1) Ibid, Page 13

(2) Lawrence Chamberlain, Principles of Bond Investment
Henry Holt and Company, New York, New York, 1911

two percent rate would be quite possible. In contrast to this prediction, Mr. Barnett Ravits pointed out on July 29, 1946 that an increase in productive loans had apparently caused a "firming of money charges" which could be expected to continue as long as that situation persisted and added that "prospects of a sharp rise this year (1946) in bank loans to industry especially heighten the probability of a hardening of high-grade bond yields." (1) Then, in October 1946, Mr. J. H. Riddle, Vice President and Economist of the Bankers Trust Company of New York predicted that long-term interest rates would not rise much above current levels for some time to come, (2) whereas, only a week or so earlier, Murray Shields of the Bank of the Manhattan Company had expressed the opinion that the trend of long and short-term interest rates should be upward. (3)

Moreover, as will be discussed more fully later, the "cheap money" policy of the United States Treasury has been an important factor in keeping rates low, not only on the large volume of government bonds held by insurance companies, but on the other securities in their portfolios as well. President Truman, in his message to Congress in January 1946, gave support to the continuation of the policy of low interest, when he said,

- (1) Barron's Financial Weekly-July 29, 1946-Page 11.
- (2) Edson B. Smith, "The Investor," Boston Herald, October 30, 1946.
- (3) Murray Shields, Inflation, Interest Rates and Investment Policy, Bank of the Manhattan Company, New York 1946.

3. Definitions

Low interest rates will be an important force in promoting the full production and full employment in the postwar period for which we are all striving, (1)

and as recently as October 1946, Mr. J. H. Riddle of Bankers Trust Company New York, in a speech in Boston, stated,

It seems unlikely that the rate on Government issues will rise above $2\frac{1}{2}\%$, at least as far ahead as we now can see. (2)

It appears, therefore, that no relief in this direction can be expected for the time being.

Such have been the investment problems confronting life insurance companies during the past fifteen years, and such have been the forces influencing and shaping the investment practices of these large financial institutions during this period.

Before attempting to analyze and discuss in detail the investment trends and policies of life insurance companies since 1930, clarification of some of the most frequently used terminology which will be found herein is desirable.

- (1) "The Economy in War and Transition-A Review of 1945," Survey of Current Business, February 1946.
- (2) Edson B. Smith, "The Investor," Boston Herald, October 30, 1946.

4. Mortgage Bonds versus Debenture Bonds

Mortgage bonds are those obligations secured by the pledge of specific property as a guaranty of payment.

- (1) Joseph B. Moleson, Life Insurance, Sixth Edition, McGraw-Hill Book Company, Inc., New York 1945-Page 18.
- (2) Life Insurance Fact Book 1946, Institute of Life Insurance, New York, 1946.

B. Definitions

1. Life Insurance Company

Although the nature and functions of institutions designated as life insurance companies are common knowledge, a few words are required to distinguish between the so-called "Stock Companies" and the "Mutual Companies," the two principal types. The former are organized by stockholders who subscribe the necessary funds to launch the business, control the company and share in the distribution of any profits. The second type, on the other hand is a "cooperative association of persons established for the purpose of effecting insurance on their own lives," (1) any profits of which are distributed to policyholders in the form of dividends. Most of the data compiled for this report concern mutual companies, but the aggregate figures from certain statistical sources cover the stock companies as well. At the end of 1945, life insurance held by mutual companies represented 70% of the total in force, and stock companies accounted for 30%. (2) Common usage permits the dropping of the word "insurance," and the shortened form-"life company"-will be found frequently throughout this report.

2. Mortgage Bonds versus Debenture Bonds

Mortgage bonds are those obligations secured by the pledge of specific property as a guaranty of payment,

- (1) Joseph B. Maclean, Life Insurance, Sixth Edition. McGraw-Hill Book Company, Inc., New York 1945-Page 18.
- (2) Life Insurance Fact Book 1946, Institute of Life Insurance, New York, 1946.

whereas debenture bonds, or debentures as they are usually called, generally are unsecured promises. Some of the latter, however, because of the absence of prior obligations, have a senior claim, while other debentures may become secured, under the "equal coverage" clause included in some indentures if mortgage bonds are issued subsequent to them. (1)

3. Funded Debt-Sinking Fund

Technically, the term "funded debt" is limited to bonds and other similar obligations which require the establishment of a fund, called a sinking fund, to be built up during the life of the issue sufficient to retire all or part of it by maturity. The term is used loosely to refer to all long-term bonds and notes as distinguished from current or short-term indebtedness.

4. Indenture

This is the written instrument or agreement between the borrower and the trustee which sets forth the rate of interest and other terms of a bond issue, and which, in the case of mortgage bonds, transfers title to the pledged property to the trustee as long as the bonds issued thereunder are outstanding.

5. Gross Revenues

These include total receipts directly attributable

(1) David F. Jordan, Jordan on Investments, Fourth Revised Edition. Prentice-Hall, Inc. New York, 1941. PP. 19-20.

to the operation of an enterprise. Income from investments and similar miscellaneous receipts generally are not included but are classified as "other income."

6. Equity

This term refers to the common stockholders' interest in a company. It is the sum of the common stock account (market or book value) and the surplus accounts.

7. Net Property

To arrive at the value of net property, the Reserves for Depreciation, Retirement and any similar valuation reserve are deducted from the total of the property account as shown by the company's books (gross book value.) Further adjustments are frequently made to eliminate appraisal write-ups and similar items which have inflated the property accounts.

8. Ledger Assets versus Admitted Assets

Ledger assets, as the name implies, are those shown on the books of the company and must be supported by statements, on a cash basis, of income and disbursements.

Admitted assets, on the other hand are those values which the state insurance commissioners say may be properly considered as real resources of the company. They include values for bonds and stocks on the basis prescribed by state regulation which may or may not be the cost of amortized values, and good assets not yet received or entered on the ledger (interest due or accrued.) They exclude assets shown on the

ledger which are not considered good assets by state insurance commissioners (cash advanced to agents and overdue rents.) (1)

9. Par Value

Par value is the nominal value of a security, ie., the principal amount which will be paid by the issuing company upon maturity or redemption thereof, without consideration or inclusion of accrued interest or redemption premiums. This is the figure which is printed or engraved on the face of the stock certificate or bond; hence the term face value is considered to be synonymous with par value.

In the case of bonds, par value is usually one thousand dollars, but for stocks, it may vary from one dollar or less to one hundred dollars; most often it is the latter figure. Some stocks are issued without any face value, in which case they are called "no par" stocks. (2)

10. Legal Investment

This term refers to those securities, the purchase of which is permitted by the statutes of the various states. In some states, the law specifies that insurance investments will be restricted entirely to those of a certain type and/or quality; others limit the purchase of certain types of securities to a specified percentage of a given issue or of

(1) Joseph B. Maclean, op. cit., pp. 300-301.

(2) David F. Jordan, op. cit., pp. 13 and 36.

the company's assets. For a full discussion of this matter, see Section I C 4. Investment Income in Successful Operation of Insurance Companies

There are three major factors in the determination of life insurance profits which, in turn, affect the net asset of insurance to the policyholders. Expressed in non-technical language these are: (1) the death rate among policyholders; (2) the rate of interest earned on investment funds; (3) the expenses of operation. The "Gain From Insurance" section of the companies' annual statements designated these items as (1) mortality savings (2) excess interest, and (3) excess loading, respectively. Other less important sources of gain in this section of the statements are: (1) gain from surrender and lapse and (2) miscellaneous gains. The former item represents the difference between the amount paid to a policyholder on death or maturity and the amount of the net reserve held against his policy at the time of death.

In setting premium rates allowance is made on the basis of past experience for the three principal factors mentioned above. Obviously if the actual experience of the company after a policy has been sold differs from the situation assumed when rates were set, a gain or loss occurs, depending upon the way the "dice" fall. For example, most insurance companies still base the mortality element of their premium charges on a table of life expectancies, of mortality table as it is called, prepared seventy-five years ago, based on Experience Table which was not made with account the

C. Statement of Problem

1. Importance of Investment Income in Successful Operation of Insurance Companies

There are three major factors in the determination of life insurance profits which, in turn, affect the net cost of insurance to the policyholders. Expressed in non-technical language these are: (1) the death rate among policyholders; (2) the rate of interest earned on invested funds; (3) the expenses of operation. The "Gain from Insurance" section of the companies' annual statements designates these items as (1) mortality savings (2) excess interest, and (3) excess loading, respectively. Other less important components of this section of the statements are: (1) gain from surrender and lapse and (2) miscellaneous gains. The former item represents the difference between the amount paid to a policyholder on default of premium payments and the amount of the net reserve held against his policy at the time of default.

In setting premium rates allowance is made on the basis of past experience for the three principal factors mentioned above. Obviously if the actual experience of the company after a policy has been sold differs from the situation assumed when rates were set, a gain or loss occurs, depending upon the way the "chips" fall. For example, most insurance companies still base the mortality element of their premium charges on a table of life expectancy, or mortality table as it is called, prepared seventy-five years ago, (American Experience Table) which does not take into account the

improvement of health and the general lengthening of the life span of human beings since that time. (1) As a result of the persistent downward trend in the death rate among policyholders (almost 10% from 1925-1940), (2) this "mortality" portion of the insurance cost has been reduced substantially, "Gains from Mortality" have climbed upward accordingly. (Figures 1 and 2) In 1944, the Equitable Life Assurance Society reported a mortality gain over and above the expected mortality of \$33,000,000, an amount equal to about 1% of its then outstanding liabilities. (3) Mortality during 1946 among the policyholders of the Mutual Life Insurance Company of New York was only 53.9% of the rate provided for. This was the lowest ratio for any year on record, except for 1925 and 1926, and the Mutual's gains from the savings in mortality, were the greatest for any year in its 104 year history. (4)

As a result of management economies which have been effected, expenses of operation have been held down and the ratio of expenses to income, for the life companies as a whole, has remained fairly constant since 1934, (range of 13.6%-14.2%) in spite of increases in the amount of new insurance issued and in services to policyholders.

- (1) Joseph B. Maclean, op. cit. Page 75.
- (2) Life Insurance Fact Book, Institute of Life Insurance, New York, N. Y. Page 32.
- (3) Thomas I. Parkinson, "Low Interest Rates and Public Welfare." Commercial and Financial Chronicle, November 15, 1945.
- (4) Wall Street Journal, January 30, 1946.

improvement of health and the general lengthening of the life span of human beings since that time. (1) As a result of the persistent downward trend in the death rate among policyholders (almost 10% from 1923-1940), (2) this "mortality" portion of the insurance cost has been reduced substantially, "Gains from Mortality" have climbed upward accordingly. (Figures 1 and 2) In 1944, the Equitable Life Assurance Society reported a mort-

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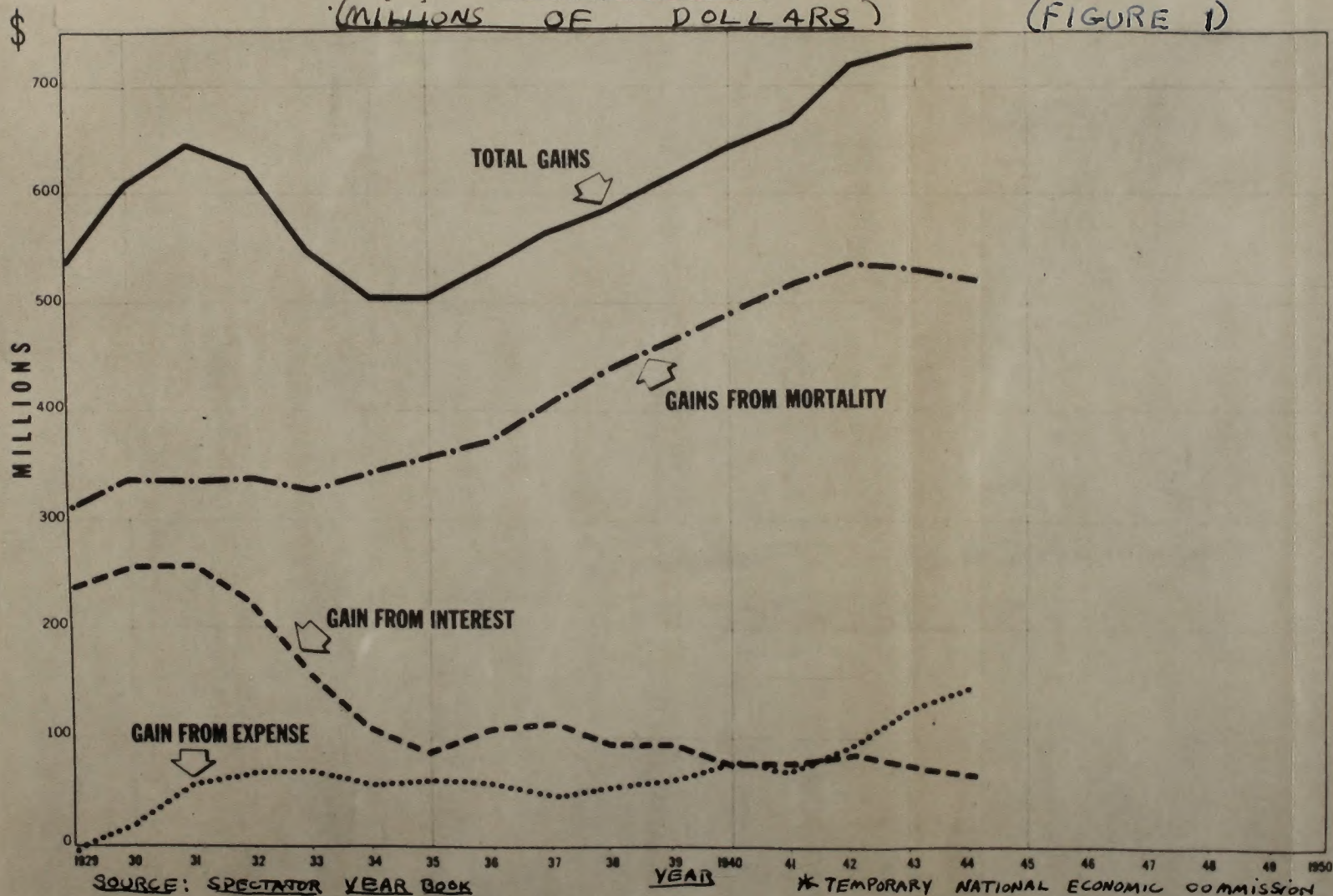
As a result of management economies which have been effected, expenses of operation have been held down and the ratio of expenses to income, for the life companies as a whole, has remained fairly constant since 1926, (range of 13.6%-14.2%) in spite of increases in the amount of new insurance issued and in services to policyholders.

- (1) Joseph B. MacLean, op. cit., page 73.
- (2) Life Insurance Fact Book, Institute of Life Insurance, New York, N. Y. page 32.
- (3) Thomas I. Parkinson, "Low Interest Rates and Public Welfare," Commercial and Financial Chronicle, November 15, 1943.
- (4) Wall Street Journal, January 30, 1946.

GAINS (INCOME) OF TWENTY-SIX LIFE
INSURANCE COMPANIES, BY SOURCES
1929-1944

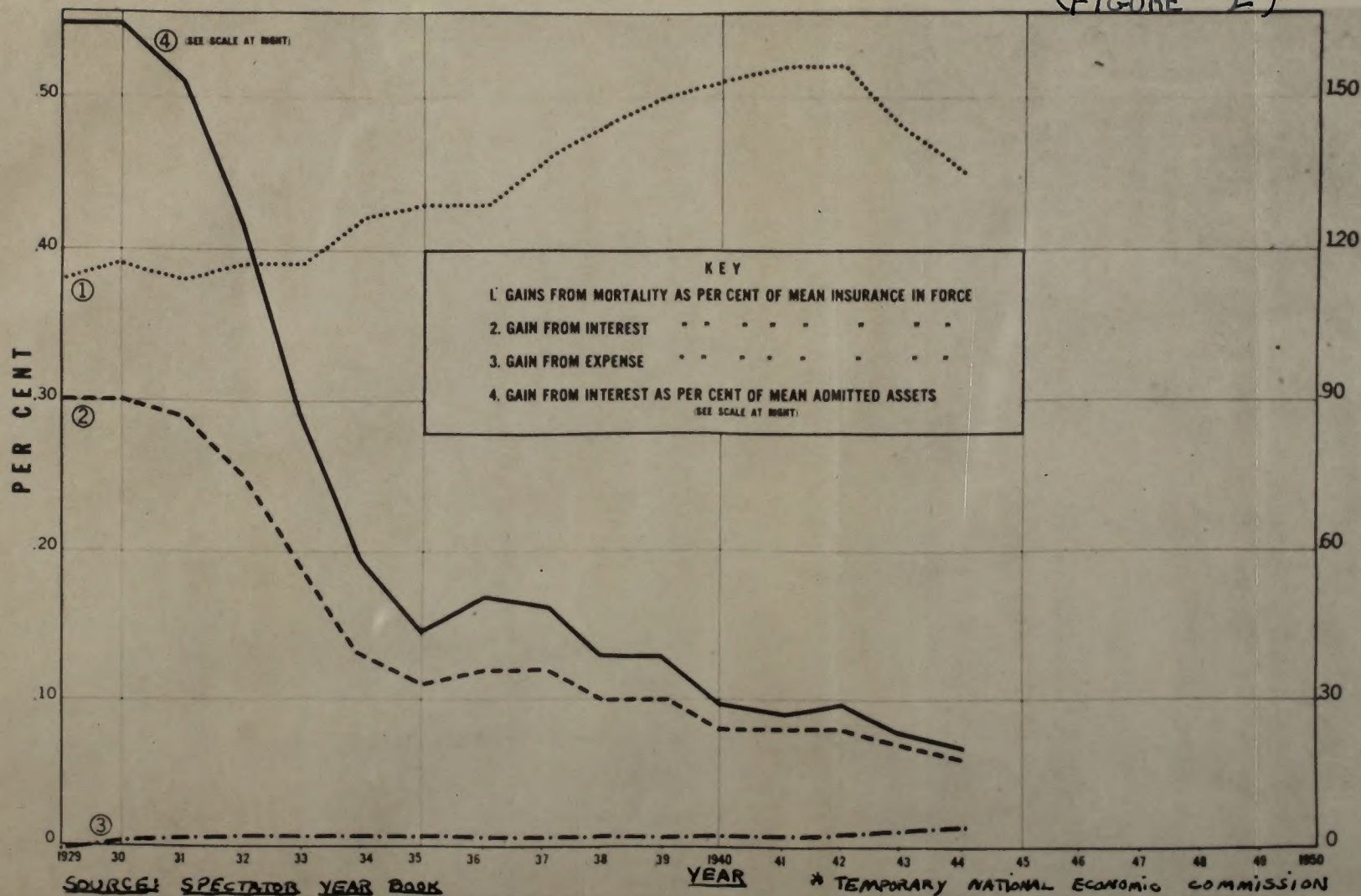
(MILLIONS OF DOLLARS)

(FIGURE 1)



GAINS (INCOME) OF TWENTY-SIX LIFE INSURANCE
COMPANIES, BY SOURCES, RELATED TO SIZE OF COMPANIES
1929 - 1944

(FIGURE 2)



In 1945, the ratio was 13.7%, a slight increase over the 1943 and 1944 figure of 13.6%. (1) Moreover, between 1942 and the end of 1944 the actual gains from expense in dollars for the twenty-six companies in the T.N.E.C. analysis took a sharp rise while the ratio of these to mean admitted assets of these companies which had maintained an almost level course for the preceding ten years began to move upward slightly. (See Figures 1 and 2) For example, the Equitable Life reported a gain of \$24,000,000 in the expense factor in 1944 over what had been expected and provided for, and most other large insurance companies enjoyed corresponding gains. (2)

In contrast to the improvements shown in the mortality and expense elements in the cost of life insurance, we find that the third principal factor, "Gains from Interest" or "excess interest," has been dropping precipitously since 1930, due to the sharp decline in the net rate earned on the invested funds. (Figures 1 and 2) Before discussing the reasons for and effect of the decrease in the interest return on investments which was a difficulty common to all of the insurance companies, it is necessary to point out in non-technical terms why this matter of interest is so vital to these institutions and their policyholders.

(1) Life Insurance Fact Book, op. cit. Page 33.

(2) Thomas I. Parkinson, op. cit.

During the sixteen-year period, 1930-1945, income in the form of dividends and interest for all life companies in the United States averaged 18.1% of the total income of these institutions. Rents received represented another 2.5%, making the average revenue from all invested funds 20.6% of the total income. (Table I) More significant, however, is the fact that income from these sources which was 22.0% of the total in 1939 had declined to 18.8% in 1945. This means that other income, principally premiums of policyholders, accounted for approximately 3.2% more of the companies' income in 1945 than in 1939. In other words, policyholders, who had to contribute a larger percentage of the insurance companies' revenues, were the ones who really suffered from the relative decline in investment income brought about by the decrease in interest rates.

Table II shows in another way the effect of interest rates on the cost of life insurance. In 1945, the net investment income of the ten larger companies was almost \$860,000,000. If the net interest rate earned had been 1% higher than it was in that year, these companies would have realized additional income from their investments in the amount of over \$278,000,000, or 32.4% more than they actually received. Revenue from policyholders could have been cut down accordingly, either in the form of dividends or smaller premium payments.

DIVIDENDS, INTEREST, RENTS, etc., AND TOTAL INCOME
OF U. S. LIFE INSURANCE COMPANIES

TABLE I

1930 - 1945

(5)

Year	(1) Total Income	(2) Dividends Int., etc.	(3) Rents Received	(4) Total Columns (2) & (3)	Percent		No. of Companies Included
					Column (4) to Col. (1)	Column (2) to Col. (1)	
1930	\$ 4,593,973	\$ 853,188	\$ 37,292	\$ 890,480	19.4%	18.6%	352
1931	4,850,376	891,803	40,587	932,390	19.2	18.4	342
1932	4,653,396	885,185	45,764	930,949	20.0	19.0	328
1933	4,622,292	824,136	62,902	887,038	19.2	17.8	318
1934	4,785,985	861,305	99,715	961,020	20.1	18.0	313
1935	5,072,095	876,030	137,004	1,013,034	20.0	17.3	340
1936	5,180,225	903,982	177,068	1,081,050	20.9	17.5	315
1937	5,257,040	936,897	195,477	1,132,374	21.5	17.8	308
1938	5,357,452	962,750	193,502	1,156,252	21.6	18.0	306
1939	5,453,134	1,003,665	197,138	1,200,803	22.0	18.4	306
1940	5,657,842	1,039,350	192,061	1,231,411	21.8	18.4	305
1941	5,855,121	1,075,357	193,211	1,268,568	21.7	18.4	304
1942	6,028,931	1,155,704	183,094	1,338,798	22.2	19.2	303
1943	6,441,841	1,195,059	173,246	1,368,305	21.2	18.6	305
1944	7,010,715	1,243,527	143,451	1,386,978	19.8	17.7	305
1945	7,673,987	1,323,460	120,994	1,444,454	18.8	17.2	348
16-Yr. Avge/	\$ 5,899,628	\$ 1,068,760	\$ 146,167	\$ 1,214,927	20.6 %	18.1 %	

Source: Spectator Yearbook

EFFECT OF INTEREST EARNINGS ON COST OF LIFE INSURANCE
(000 Omitted)

TABLE II

	1944			1945		
	Net Investment Income	Add. Inv. Inc. if Net Int. Rate Earned 1% Higher	% Add. Inc. to Net Inv. Income	Net Investment Income	Add. Inv. Inc. if Net Int. Rate Earned 1% Higher	% Add. Inc. to Net Inv. Income
Metropolitan	\$ 217,229	\$ 63,200	29.1 %	\$ 226,880	\$ 68,200	30.1 %
Prudential	163,189	52,800	32.4	172,969	57,400	33.2
Equitable	97,531	32,000	32.8	100,016	36,000	36.0
New York Life	100,693	32,700	32.5	102,684	35,100	34.2
Northwestern Mutual	56,669	16,100	28.4	58,659	17,100	29.2
John Hancock	46,575	15,000	32.2	50,226	17,000	33.8
Mutual of New York	44,862	16,100	35.9	47,929	16,800	35.1
Travelers'	36,358	11,100	30.5	39,702	11,800	29.7
Aetna	28,090	10,200	36.3	30,958	9,600	31.0
Penn Mutual	28,361	8,700	30.7	29,571	9,400	31.8
Total - 10 Companies	\$ 819,557	\$ 257,900	31.5%	\$ 859,594	\$ 278,400	32.4 %

Sources: Best's Life Reports (Net Investment Income)
Spectator, Sept. 1946 (Additional Investment Income)

Now let us go a step farther in our investigation and see exactly how and why this matter of investment income affects the amounts paid by policyholders as premiums. Part of each premium payment is allocated to what is known as the policy reserve. The amounts credited to this reserve are carefully calculated in advance so that, taking into consideration interest which may be earned on the reserve funds when invested, a sufficient sum will accumulate during the life of the policies to provide for payment of the face amount of the policies on maturity or upon the death of the insured. (1) In estimating the growth of the accumulated reserves on all policies, each company adopts a specific rate of interest which it assumes will be earned on the invested funds and added to the reserve. This assumed rate normally is slightly below the actual current and anticipated future rate, in order to provide a safety factor or "margin of safety."

On December 31, 1945, almost 70% of the policy reserves for the thirty-eight leading life insurance companies had been calculated on a 3% or $3\frac{1}{2}\%$ basis. (2) (See Table III and Figure 3.) Only eight out of these thirty-eight companies had a current reserve basis on all or part of their outstanding policies of less than 3% on that date. Ten or more years ago when the policies were being written this

(1) Life Insurance Fact Book, op. cit. Page 35.

(2) The Spectator, September 1946.

(TABLE III) — ANALYSIS OF POLICY RESERVES
38 INSURANCE COMPANIES — DECEMBER 31, 1945

Name of Company	Current Reserve Basis	Gross Life and Annuity Reserve as of Dec. 31, 1945	Reserve outstanding at rates of interest					Annuities at Various rates of Interest *
			4%	3-1/2%	3%	2-3/4%	2-1/2%	
Acacia Mutual.....	3	121,645,094	...	83.23	14.82	...	...	1.89
Aetna Life.....	P 2-1/2 NP 3	811,493,437	...	53.82	10.10	...	3.46	32.62
Bankers Life, Iowa	3	267,497,796	...	70.95	15.45	...	43.11	10.49
Cal.-Western States	3	64,224,286	...	90.30	5.30	...	.03	4.37
Connecticut Gen....	P 2-1/2 NP 3	386,295,269	.09	46.73	14.29	...	1.20	37.69
Connecticut Mutual.	3	445,659,152	...	...	75.05	...	...	24.95
Continental Assur.:	3	53,783,939	...	73.90	10.83	...	4.84	10.37
Fruit. Life, N. Y....	3	3,910,737,419	...	9.08	43.72	...	.46	46.74
Fruit. Life, Iowa..	3	231,503,663	...	67.54	13.56	...	...	18.90
Fidelity Mutual....	3	141,017,972	...	55.10	28.20	...	...	16.70
General Amer. Life.	3	121,218,231	.33	80.72	15.87	...	...	3.03
Guardian Life, N.Y.	3	158,743,673	...	...	47.33	...	.14	12.53
Home Life, N. Y....	3	131,537,161	...	24.89	64.69	...	.18	10.24
Jefferson Std.....	3-1/2	119,088,614	...	87.83	6.87	...	...	5.30
J. Hancock Mut.....	3	1,438,915,456	...	57.36	21.09	...	...	21.55
Kansas City Life...	3	150,434,859	...	81.02	5.50	...	.01	13.47
Lincoln National...	3	181,701,924	.02	73.62	10.35	...	.04	15.79
Massachusetts Mut..	3	733,658,486	.79	1.23	80.14	...	...	17.84
Metropolitan.....	2-3/4	6,242,991,205	...	614.39	69.24	4.39	c.14	11.84
Minnesota Mutual...	3	56,498,708	.26	72.30	13.42	...	.23	13.79
Monumental Life....	3	58,430,327	...	91.49	8.51	...	...	...
Mutual Benefit.....	2-1/2	754,189,326	...	...	...	94.50	e.08	5.40
Mutual Life, N. Y..	3	1,336,952,887	...	...	85.22	...	.02	14.76
Mutual Trust.....	3	57,147,802	...	65.78	28.54	...	...	5.68
National Life, Vt..	3	252,304,161	...	...	74.75	...	...	25.25
New England Mutual.	3	579,813,691	.39	1.43	82.09	...	...	16.09
New York Life.....	2-1/2	2,736,026,524	...	...	28.76	449.45	.94	20.85
Northwestern Mut...	3	1,433,210,228	...	...	90.68	...	...	9.32
Northwestern Nat...	P 2-1/2 NP 3	94,947,929	.35	77.99	13.96	...	.49	7.21
Occidental Life, Cal.	3	99,322,811	.26	64.77	12.72	...	2.21	20.04
Penn Mutual.....	3	734,149,860	...	...	74.39	...	...	25.61
Provident Mutual...	2-1/2	392,193,908	...	48.06	32.28	...	1.10	18.56
Prudential.....	2-1/2	3,577,135,446	...	.24	160.65	24.67	4.60	9.78
Reliance Life.....	3	162,084,194	...	86.96	6.11	...	.42	6.51
Southwestern.....	3	100,830,933	g.44	85.98	3.09	...	...	10.48
State Life, Indiana	3-1/2	56,533,966	1.41	39.36	37.53	...	...	1.70
Travelers Ins.....	3	1,038,321,685	...	78.34	4.40	...	.01	17.25
Union Central.....	3	421,939,398	.53	62.36	20.49	...	...	16.62
38 Companies		14,926,833,982	.64	86.0	48.7	12.1	1.2	18.0

* Interest rates assumed for annuities varies with companies and ranges from 2% to 4%.

a Includes .31% reserve at 2-1/4 per cent.

b Includes .27% reserve at 3-1/4 per cent.

c Reserves at 2-1/4 per cent.

d Reserve at 2-3/8 per cent.

e Reserve at 2-1/4 per cent.

f Includes \$985,844,228 (17.67%) reserve at 3-1/4 per cent and \$242,693,662 (4.25%) net cost; Section 24 of the Revised Statutes of New Jersey.

g Includes 18% reserve at 4-1/2 per cent.

SOURCE: THE SPECTATOR, SEPTEMBER 1946

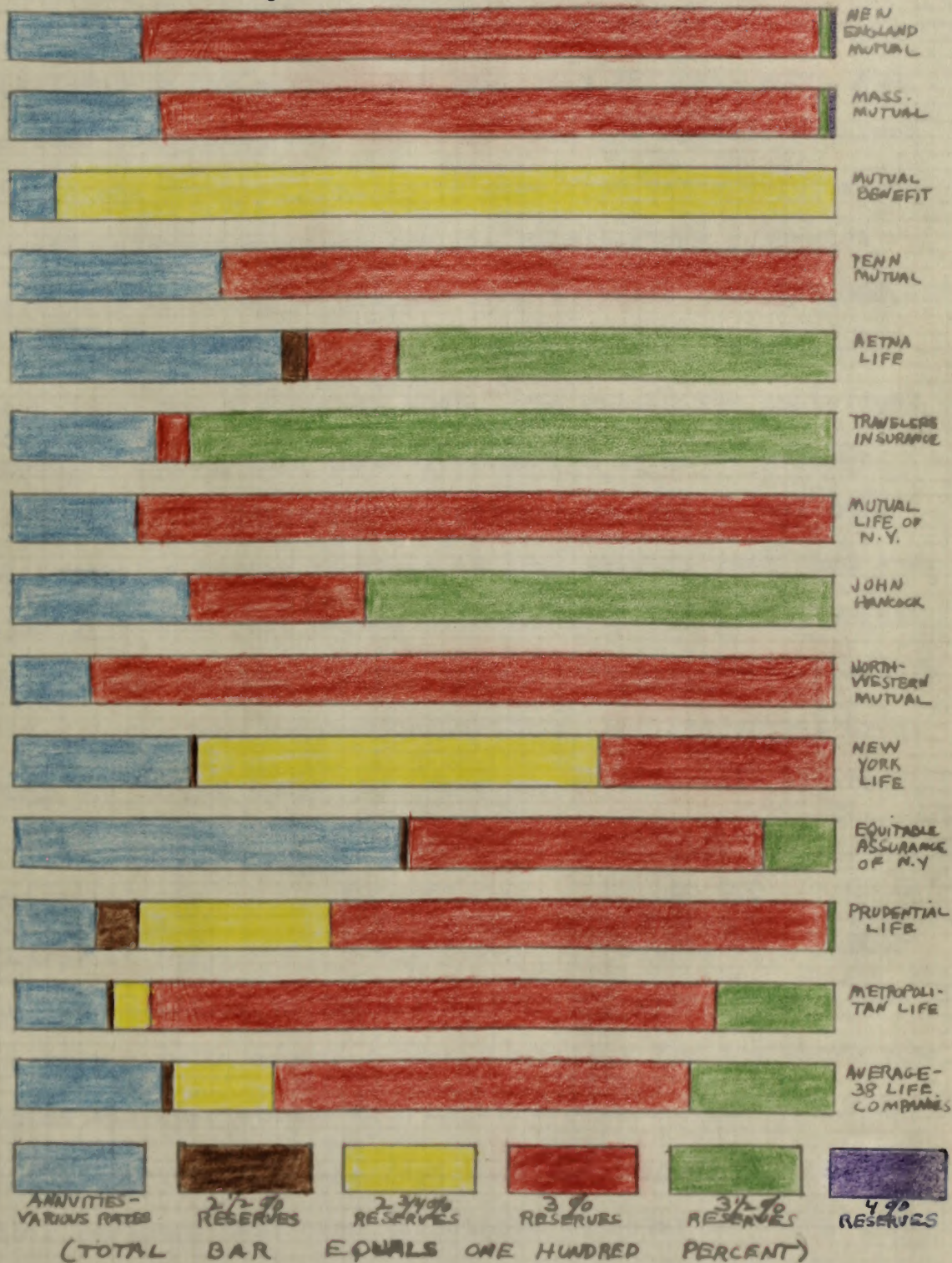
ANALYSIS OF POLICY RESERVES

THIRTEEN LIFE COMPANIES

DECEMBER 31, 1945

(AS PERCENTAGE OF TOTAL RESERVES)

(FIGURE 3)



SOURCE: THE SPECTATOR, SEPTEMBER 1946

rate seemed conservative because the general level of interest then was somewhere between 4% and 5%. Now, due to the sharp decline in interest rates, the return on investments on the average has been only slightly more, and, for some companies, has been less than the amounts required to maintain reserves. As may be seen from Table IV, the "excess" interest earnings for the thirty-eight companies previously referred to dropped from a little over \$75,000,000 in 1943 to about \$69,000,000 in 1944 and then increased slightly to \$71,000,000 in 1945. The record for individual companies during this three-year period is quite erratic. A few, like the Metropolitan, and New England Mutual made substantially better showings in 1945 than in 1943, but the majority either just barely held their own or actually lost considerable ground. In the latter category, Equitable Life of New York, John Hancock Mutual Life, and Prudential Life, among the larger companies, show the most drastic declines.

	<u>1943</u>	<u>1945</u>	<u>%Decrease 1943-1945</u>
Equitable	\$10,641,000	\$2,133,000	80.0
John Hancock	2,571,000	1,310,000	49.0
Prudential	4,245,000	2,122,000	50.0

Further reference to Table III, page 20, seems to indicate that the shrinkage in excess interest earnings for the above companies and most others with negative and/or declining figures may be attributed to the fact that the largest proportion of their reserves have been calculated at rates in excess of those which may be earned today on their invested funds.

EXCESS INTEREST EARNINGS
38 INSURANCE COMPANIES
1943 - 1945

(TABLE IV)

Name of Company	Excess Interest Earnings Over the Amount Required to Maintain Reserves		
	1943	1944	1945
	\$	\$	\$
Acacia Mutual.....	806,604	606,634	364,865
Aetna Life.....	389,367	553,601	1,823,946
Bankers Life, Iowa	754,549	-91,834	210,301
Cal.-Western States	262,238	138,248	-20,488
Connecticut Gen....	1,871,395	2,006,158	1,721,338
Connecticut Mutual.	3,137,530	3,328,599	3,554,396
Continental Assur.:	-80,624	-116,290	-122,490
Equit. Life, N. Y....	10,641,263	6,434,175	2,133,090
Equit. Life, Iowa...	800,589	267,979	206,363
Fidelity Mutual....	226,647	-77,975	-267,769
General Amer. Life.	1,435,915	1,311,088	831,184
Guardian Life, N.Y.	738,914	742,498	556,582
Home Life, N. Y....	621,997	544,032	524,835
Jefferson Std.....	1,653,713	1,618,773	1,480,911
J. Hancock Mut.....	2,571,422	2,248,028	1,310,084
Kansas City Life...	-272,137	-415,428	-756,748
Lincoln National...	77,623	174,579	155,476
Massachusetts Mut..	3,797,011	4,005,543	3,450,779
Metropolitan.....	9,572,666	16,802,977	18,017,529
Minnesota Mutual...	199,129	87,395	102,544
Monumental Life....	-385,822	-330,346	466,409
Mutual Benefit.....	3,863,645	3,029,966	3,134,851
Mutual Life, N. Y..	-1,893,656	-1,660,309	75,264
Mutual Trust.....	319,001	169,177	-1,025
National Life, Vt..	1,668,925	1,344,158	1,805,048
New England Mutual.	2,334,530	3,130,703	4,250,467
New York Life.....	11,296,331	10,238,703	10,896,144
Northwestern Mut...	12,133,630	10,560,324	8,343,288
Northwestern Nat...	13,566	-166,703	-301,193
Occidental Life, Cal.	210,344	504,399	423,096
Penn Mutual.....	2,115,000	1,958,096	1,781,852
Provident Mutual...	651,811	74,343	670,243
Prudential.....	4,244,708	2,517,941	2,121,593
Reliance Life.....	-114,154	-237,490	-143,603
Southwestern.....	431,209	275,007	104,868
State Life, Indiana	161,472	31,511	2,906
Travelers Ins.....	-291,353	-1,550,188	2,284,347
Union Central.....	88,988	-208,836	171,000
TOTAL - 38 cos.	25,287,975	64,349,176	71,000,288

SOURCE: THE SPECTATOR, SEPTEMBER 1946

In order to get a more detailed picture of how this matter of interest earnings has affected the financial position of insurance companies, during the past fifteen years, a study has been made of John Hancock Mutual Life Insurance Company. The results of this investigation are portrayed graphically in Figures 4, 5 and 6. Figure 4 shows the change which has occurred in the percentage composition of this company's policy reserves. In 1930, all of the reserves were calculated on a $3\frac{1}{2}\%$ basis. Then in 1931, it appears that the Hancock began issuing policies on a 4% basis also, so that, at the end of 1934, 1.3% of the reserves had been computed at that rate. As interest rates began to fall, however, the issuance of 4% policies was stopped, (1934) surplus funds were allotted to raise the reserves on outstanding policies to a $3\frac{1}{2}\%$ basis and premiums on all new policies being issued were set at a figure which provided for the accumulation of reserves on a 3% basis. In five years, 1935-1944, this 3% reserve has increased to 28.4% of the total reserves, while the $3\frac{1}{2}\%$ reserve has dropped from 99.1% of the total to 64.3%. In 1938, a $3\frac{1}{4}\%$ reserve made its appearance but was eliminated at the end of 1940 when the $2\frac{1}{2}\%$ policies first began to be issued; one year later 2% policies appeared on the scene. At the end of 1944, the 2% and $2\frac{1}{2}\%$ reserves represented only 7.3% of the total but were increasing as more of the new policies were being issued on these bases.

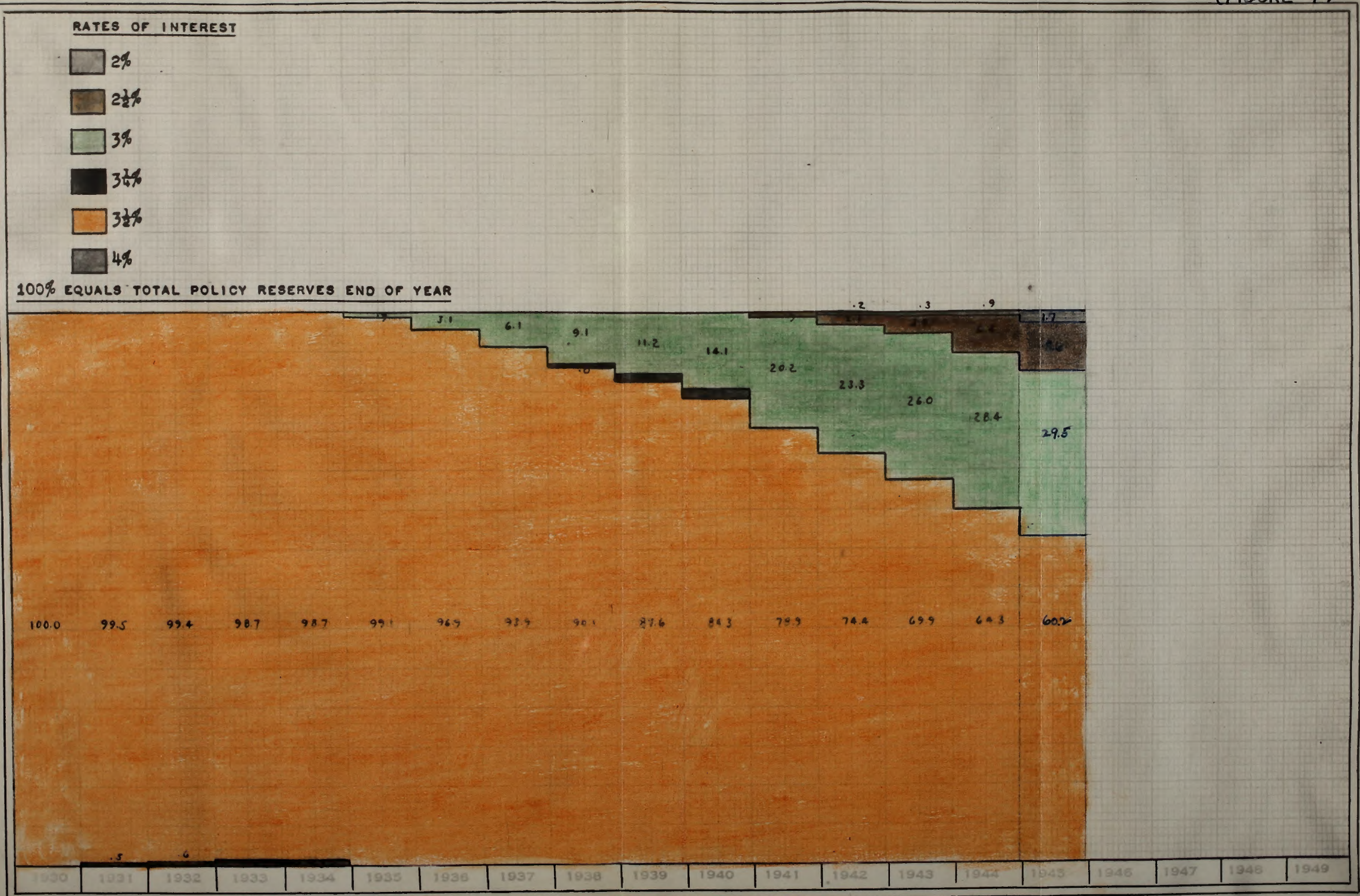
Figure 5, shows a comparison of interest required

PERCENTAGE COMPOSITION OF POLICY RESERVES BY RATES OF INTEREST
(1930-1945)

EXCLUDING A.D.B. AND DISABILITY RESERVES

(FIGURE 4)

JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY



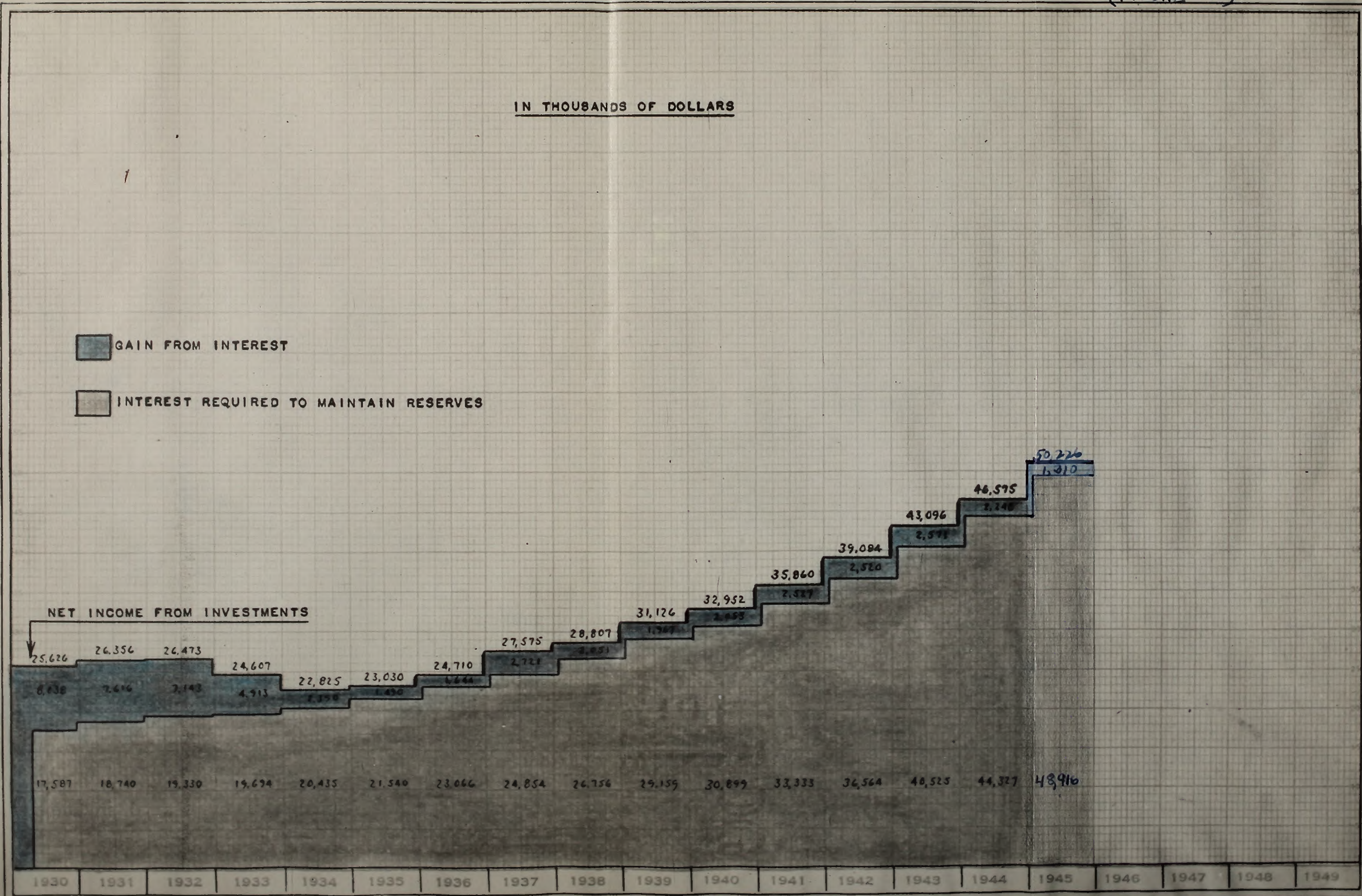
COMPARISON OF INTEREST REQUIRED TO MAINTAIN RESERVES WITH NET INVESTMENT INCOME

JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY

1930-1945

(FIGURE 5) CONSOLIDATED

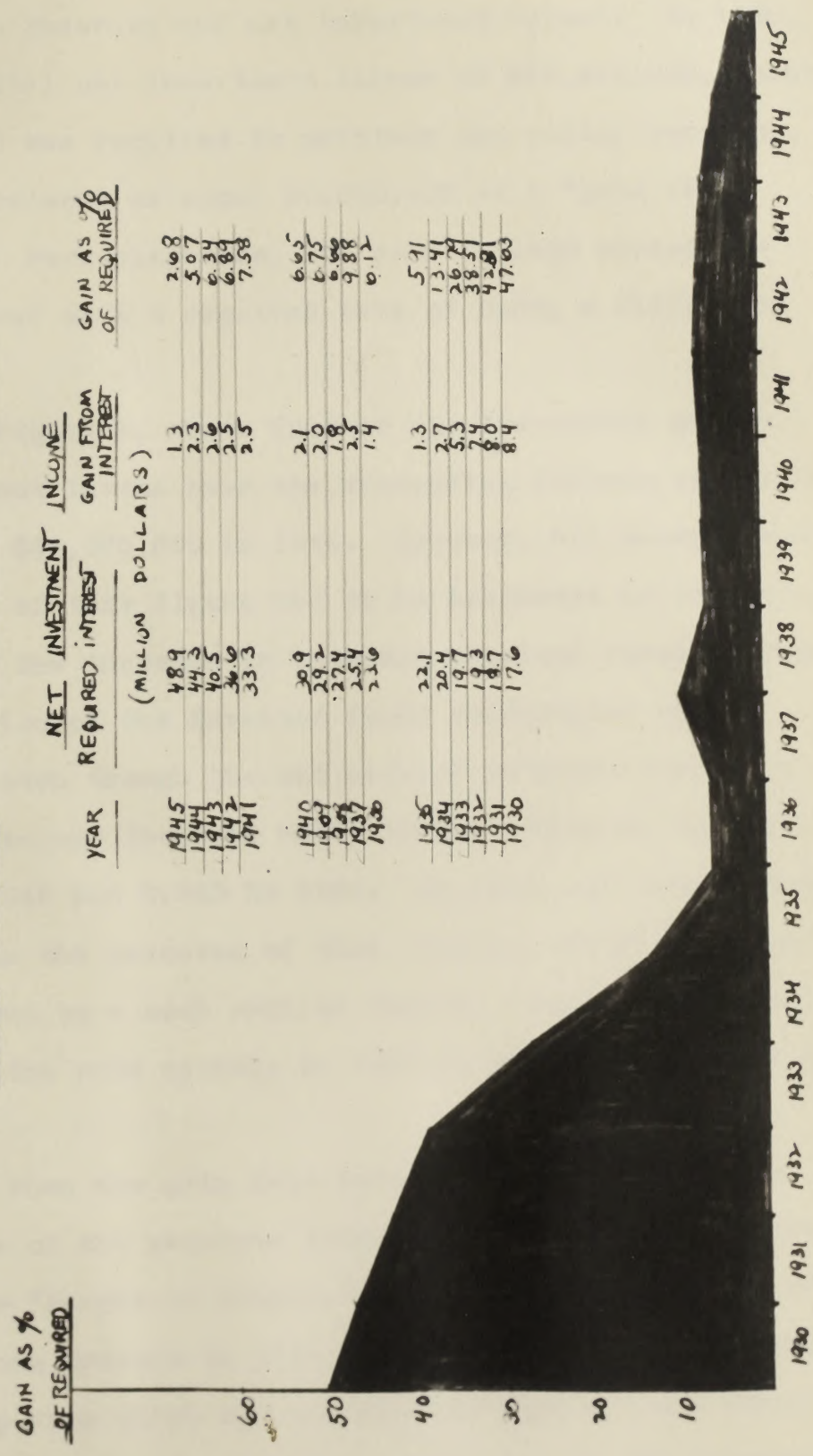
IN THOUSANDS OF DOLLARS



MARGIN OF SAFETY
INTEREST EARNED IN EXCESS OF INTEREST REQUIRED
(REQUIRED INTEREST = 100) (FIGURE 6)

1930 - 1945

JOHN HANCOCK MUTUAL LIFE INSURANCE CO.



SOURCES: SPECTATOR YEARBOOK; SPECTATOR, SEPTEMBER 1946; BEST'S LIFE REPORTS; AND COMPANY RECORDS

to maintain reserves and net investment income. In 1930, out of a total net investment income of \$25,626,000, about \$17,600,000 was required to maintain the policy reserves, leaving a balance of about \$8,000,000 as a "gain from interest." Percentagewise, the rate in 1930 earned was 4.94 compared with a required rate of 3.35, a difference of 1.59.

Figure 5, shows further the tremendous growth in investment income over the succeeding fifteen years, to a total of \$46,575,000 in 1944. However, all except about \$2,200,000 of this figure had to be allocated to the policy reserves. The increase in interest received resulted from the expansion of the invested funds represented by the reserves, even though the net rate of interest earned by the John Hancock declined until it reached 3.13% in 1944, 3.00% in 1945 and 2.96% in 1946. By 1944, the rate required to maintain the reserves of this company, which likewise had declined but to a much smaller degree, stood at 2.98, only .15 below the rate earned; in 1945 it was 2.93 and in 1946, 2.85.

When the gain from interest is expressed as a percentage of the required interest, the resulting figure is called the "Margin of Safety." This safety factor was 47.6% for the John Hancock in 1930 and only 5.1% in 1944. (Figure 6) This sharp drop which was experienced also by most other insurance companies reveals the seriousness of the interest situation and, unless the rate earned begins to climb, there

will be no alternative to an increase in premium rates on the part of all companies to insure that amounts accumulating in the policy reserves are adequate to meet the payments due on the policies on maturity.

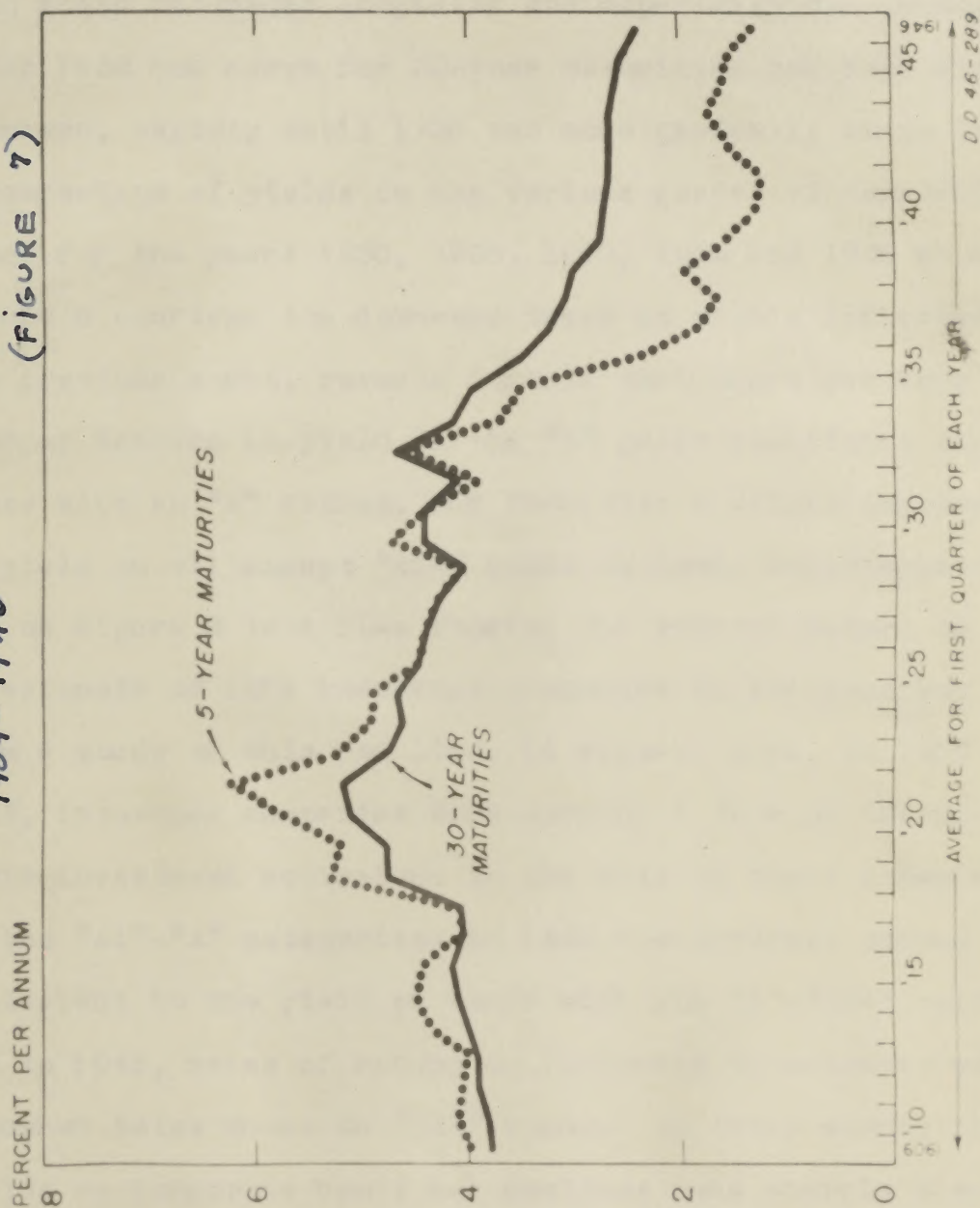
On the other hand, if a material upswing in the interest rate earned by companies should take place soon, increases in the cost of insurance would be unnecessary. In Table II, computations have been made to show that the additional income which would have accrued to the ten leading life companies in 1944 and 1945, if the net interest rate earned had been 1% higher in each of those years, would have increased the investment income for the ten companies by 31.5% in 1944 and 32.4% in 1945. Such additional revenue would bring the rates of interest earned and interest required to maintain reserves into a more nearly normal relationship, forestall any further increase in premiums and make possible larger dividends to present policyholders. In short, the net cost of insurance could be cut down.

2. Decreasing Rate of Interest

Having demonstrated the importance of interest earnings to insurance companies and their policyholders, we will turn our attention to an analysis of the nature and causes of the declining yield on security holdings to which some reference has been made in the previous section.

Both Figures 7 and 8 depict clearly the trend of

Chart 3.—Basic Yields of Corporate Bonds for Selected Maturities
1909-1946
(FIGURE 7)

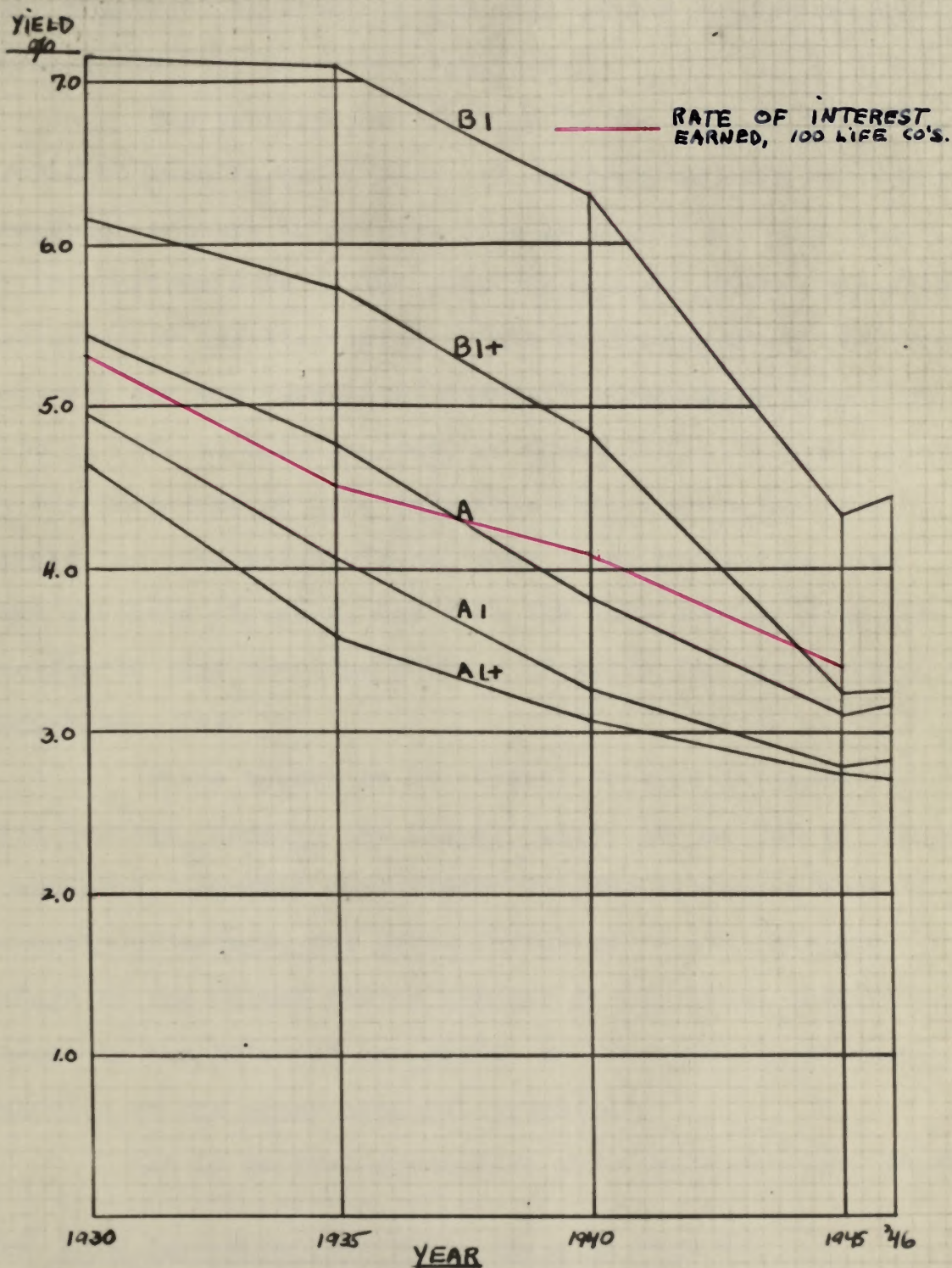


Source: *Statistical Abstract of the United States*, 1947, by David Durand, National Bureau of Economic Research. Data for 1943-46 are preliminary estimates by Mr. Durand and have not been published.

the yield on corporate bonds. Figure 7 portrays the data on both long-term and short-term bonds, but it is the former with which insurance companies are especially concerned. Since 1932 the curve for 30-year maturities has been sliding downward, rapidly until 1938 and more gradually since then. A comparison of yields on the various grades of corporate bonds for the years 1930, 1935, 1940, 1945 and 1946 shown in Figure 8 confirms the downward trend in yields indicated in the previous chart, reveals further that there has been a sharper decline in yield on the "B" grade securities than in those with an "A" rating, and indicates a slight improvement in yield on all except "A1+" bonds in 1946. Superimposed in red on Figure 8 is a line showing the average return on investments of life insurance companies in the four key years. From a study of this red line, it appears that, in 1930 and 1935, insurance companies were earning a rate of interest on their investment equivalent to the rate on bonds somewhere in the "A1"-"A" categories; in 1940 the interest earned was equivalent to the yield on bonds with the "A"-"B1+" ratings; and in 1945, rates of return on insurance investments were somewhat below those on "B1+" bonds. In other words, the yields on corporate bonds has declines more sharply than the rate of return received on insurance company investments. This would seem to indicate that the quality of securities in insurance portfolios had been sacrificed in order to keep the interest income from sliding off as much as it would have done

CORPORATE BOND YIELDS
1930, 1935, 1940, 1945, 1946

(FIGURE 8)



SOURCE: STANDARD AND POOR'S BOND GUIDE.

otherwise, and, as will be shown later this appears to have been the case, at least on the part of the larger companies whose portfolios have been analyzed.

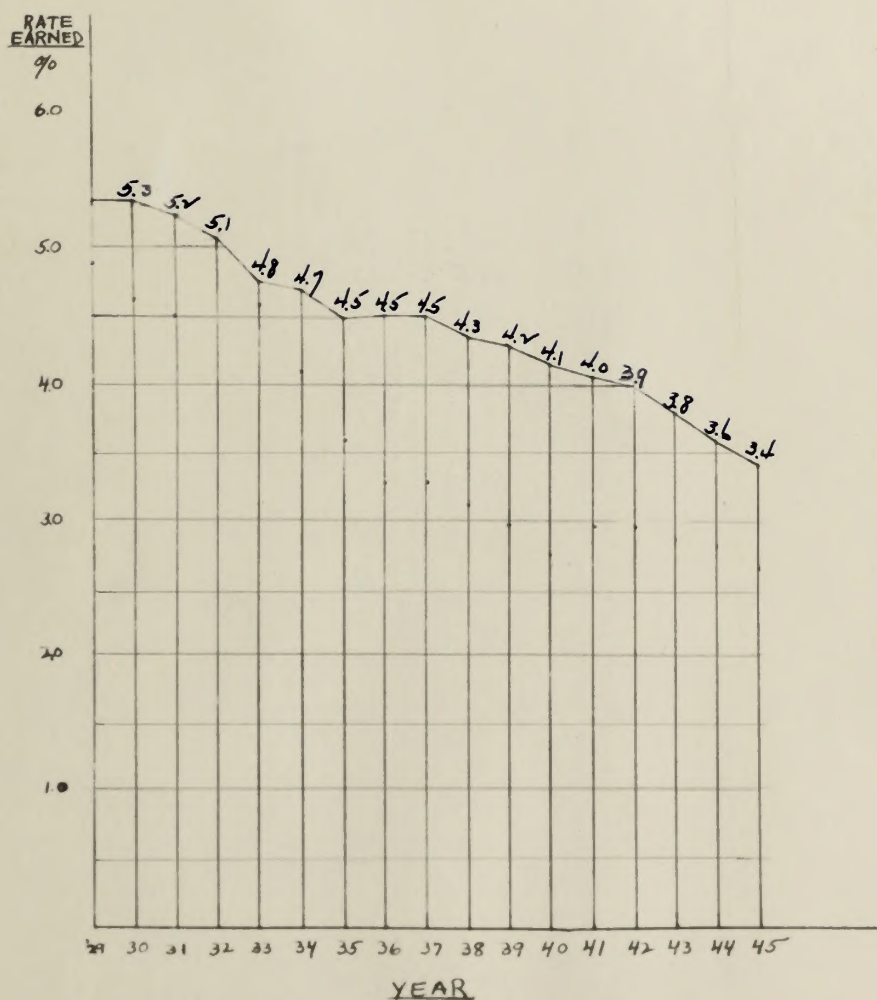
The year-by-year decline in the rate of interest earned on mean invested funds of one hundred life insurance companies appears in graphic form in Figure 9. This chart, which confirms data on the John Hancock and other companies presented in the discussion of the declining trend in "excess" interest and the "Margin of Safety," indicates a drop from 5.3% in 1930 to 3.4% in 1945, or about 36%. A report issued by the Institute of Life Insurance states that the rate earned for 1945 was 3.07%, an even lower percentage than that given in Figure 9, and that the 1945 earning rate was one-fourth less than the average of 4.10% for the decade, 1930-1939. (1)

There appear to be several factors involved in this decline, namely, the fiscal policy of the United States Government, terrific competition for the limited number of security offerings, the great influx of capital seeking refuge in the United States because of disturbed conditions abroad in the 30's and the growth in the quantity of money relative to the gross national product.

It is generally conceded that interest rates depend

(1) Life Insurance Fact Book, op. cit. Page 41.

RATE OF INTEREST EARNED ON MEAN INVESTED FUNDS
BY ONE HUNDRED LIFE INSURANCE COMPANIES, 1929-1945
 (FIGURE 9)



SOURCE: THE SPECTATOR, SEPTEMBER 1946 - 43

to a great extent on the policies of the Federal Reserve Bank and the United States Treasury. (1) Consequently it is very significant that, during the past year and a half, the dominant objective of the Treasury Department seems to have been to keep interest costs at a minimum. On April 2, 1946, Secretary of the Treasury Vinson, in his annual report to Congress, flatly reiterated that it was his intention to continue the wartime policy of low interest rates, and went on to say that,

This policy will make an important contribution to the achievement of full-production in the economy, especially after the backlog of urgent construction projects piled up by the war has been satisfied. (2)

Around the middle of 1946, hopes of insurance companies and other large institutional investors were high that the government would lend a considerate and attentive ear to their pleas for the refunding of a big volume of short-term obligations with a long-term $2\frac{1}{2}\%$ issue. One of the arguments advanced by the insurance companies was that a new long-term issue would take from the banks some of the short-term government securities which are deemed inflationary. It was contended also by experienced financial men that "non-bank investors could and would absorb additional Government

- (1) F. L. Simmons, "The Outlook for Interest Rates" May 10, 1946, Guaranty Trust Company, New York
- (2) Boston Herald, April 3, 1946, Page 25.

long-term securities at the rate of four or five billion dollars per year, even under conditions that would prevent them from selling existing holdings to banks." (1) However, both John W. Snyder who succeeded Mr. Vinson as Secretary of the Treasury and Mr. Eccles, Chairman of the Federal Reserve Board have fought doggedly against the issuance of any more long-term Government bonds on the basis that large financial institutions now have "plentiful investment opportunities" and that the market probably could not absorb additional long-term Governments at present prices. (2) To date their will appears to have prevailed so that the long-rumored refunding of short-term obligations of the United States seems to have faded out of the picture, at least for the time being. As long as the Government's current fiscal policy is maintained, investment men generally agree that any important rise in long-term rates is highly improbable. (3)

In passing, attention is called to the fact that this "easy money" policy of our Government has had a double-barrelled effect on investment income of insurance companies.

- (1) J. H. Riddle, Interest Rates and Federal Reserve Policy. Bankers Trust Company, New York, 1946. Page 9.
- (2) Boston Herald, September 25, 1946
Barrons Weekly, October 28, 1946
- (3) Edson B. Smith, Boston Herald, August 13, 1946 and J. H. Riddle, Debt Management and Interest Rates, op. cit. Page 3

Not only was the yield low on the twenty and one half billion dollars of Governments held by insurance companies at the end of 1945, (50% of total assets) but rates on the twelve billion dollars of high-grade corporate securities in their portfolios had been forced down to a level only slightly above that for the Government issues.

A second factor in the decline of interest rates has been the excessive competition for the limited amount of security offerings available. In contrast to the smaller volume of new issues, the funds of insurance companies and other large investors seeking productive outlets, as we shall see later, have been increasing by leaps and bounds. The result has been the active working out of the law of supply and demand-the bidding up of prices, ie., a lower yield, on the securities appearing on the market. In February 1946, the Madison (Wisconsin) Gas and Electric Company received sixteen bids for its proposed issue of \$4,500,000 first mortgage bonds, fifteen of which were for 2 $\frac{1}{2}$ s at a premium. The winning bid was 101.56, an unheard-of rate, up to that time, for 30-year bonds, and the bonds were reoffered to the public at a slightly less than a 2.40 basis. (1) At the same time the Union Pacific Railroad awarded \$44,493,000 of 30-year, 2-7/8% debentures to an investment banking group on a bid of 107.789, a net interest cost to the road of 2.51%, the lowest in American railroad history. (2)

(1) Edson B. Smith, "The Investor, Boston Herald, Feb. 7, 1946.

(2) Boston Herald, February 7, 1946

The reoffering price represented a yield of 2.47% to maturity. Encouraged by its success in floating those debentures, the Union Pacific brought out, a little over a month later, an issue of \$81,602,000, $2\frac{1}{2}\%$ bonds at a net cost to the road of 2.453%. (1) No matter what the price, it seems that investors have been standing around ready to gobble up every dollar of high-grade securities offered.

Among the competitors for the new issues, we find that commercial banks became increasingly active, especially during 1946. Relatively long-term bonds and notes that were formerly of no interest to them have been taken at prices too low to be attractive to insurance companies. In March 1946, for example, out of a total of \$15,000,000 bonds of Hackensack Water Co. \$14,000,000 were sold to commercial banks. The following month, Automatic Electric Company refunded its 4s of 1953 and its 3s of 1947 with the proceeds of \$8,000,000, 7-year unsecured 2% notes sold to the First National Bank of Boston! An analysis of the March 31, 1946 condition statements of the twenty largest New York banks showed that total loans had increased fifty percent over the same date in 1945. Inasmuch as the amount of government bonds held by these banks was about the same on the two dates,

(1) Boston Herald, March 14, 1946

it appears that most of the increase could be attributed to the policy of substituting bank loans for funded debt referred to on previous page. (1)

More will be said later about the "demand" side of the interest rate equation; but now a few words further regarding the "supply" factor are in order. In the first place, World War II, curtailed sharply the construction of new plants and the expansion of existing ones, except those doing work connected with national defense, so that funds were not needed to finance such undertakings. In the second place, many industries which have carried out construction programs before, during and since the war have been able to finance these extensions out of their own earnings and revenues and did not have to seek outside capital. A fine example of this is found in the electric utility industry in the United States. During the period 1937-1944, the net plant account of all electric utilities in this country increased \$900,000,000, while the amount of securities outstanding on the books of these companies decreased \$600,000,000, an indication that at least one and one-half billion had been taken out of amounts retained out of the companies' revenues either in the form of accruals for depreciation and amortization or as

(1) Edson B. Smith, "The Investor," Boston Herald, April 10, 1946.

surplus earnings remaining after payment of dividends on preferred and common stocks. (1) That the one and one-half billion dollar figure is conservative is indicated by the fact that gross property additions during 1937-1944 totaled approximately \$2,800,000. (2) If this amount had not been on hand in the companies' pockets, a sizable addition would have been made to the security issues floated.

Without question, part of decline in interest rates can be attributed to the "ferocious" refinancing encouraged and abetted by the investment banking interests and even by some of the more eager insurance companies themselves. After interest rates had made their first decline, investment houses began to promote aggressively the idea of refunding outstanding securities with those bearing lower interest coupons. Even though a high call price had to be paid to the holders of the old bonds it was pointed out that most, if not all of that, would be absorbed by the excess profits tax. Some issues, as a result, have been refunded two, three and even four times in as many years. Northern Natural Gas Bonds, sold originally on a 4-3/4% basis were refinanced

- (1) "The Financial Record of the Electric Utility Industry, 1937-1944" Page 5 & 6. F. P. C. Washington, D. C. November 15, 1945.
- (2) Ibid. Pages 5 and 6.

(3) Loc. cit.

(4) Elbert N. Brigham, "Investing for Security of Home and Nation." National Life Insurance Co., 1942.

at $4\frac{1}{4}\%$, then at $3\frac{1}{4}\%$ and finally, in the latter part of 1945, on a $2\frac{1}{4}\%$ basis! (1) Similarly the 5% bonds of the Public Service Company of Oklahoma, bought originally for long-term investment by the Equitable at around 90, were refunded as 4s, then as $3\frac{1}{4}s$ and eventually as $2-3/4s$. (2)

Coming back again to the matter of demand for investment outlets, mention must be made of three other influences which have affected interest rates adversely, especially during the war years. One is the great influx of foreign capital seeking refuge in the United States because of disturbed conditions abroad. (3) Correlative with this is, of course, the curtailment of American investments in foreign countries. Now that the war is over this situation presumably will correct itself, at least in part, with the withdrawal of foreign-owned capital, so that competition for the limited investment offerings may be somewhat lessened.

The second point concerns the growth in the quantity of money relative to the gross national product. The following quotation from an article by Haskell P. Wald in Survey of Current Business for May 1946 sums up the salient ideas on this matter:

- (1) Thomas I. Parkinson, "Low Interest Rates and Public Welfare." The Commercial and Financial Chronicle, November 15, 1945.
- (2) Loc. cit.
- (3) Elbert S. Brigham, "Investing for Security of Home and Nation." National Life Insurance Co., 1942.

Over any extended time period a sizable growth in the quantity of money relative to the gross national product will tend to be reflected in increased availability of funds for investment. Competition for investment outlets will then result in a lowering of interest rates, unless there are simultaneous increases in the demand for borrowed funds which have counterbalancing effects. (1)

Just what are the facts in the case? In 1929 the money supply of the country, (ie. total of currency in circulation and deposits) was \$55,000,000. By 1932 or 1933 this figure had dropped in the great "deflation" to \$42,000,000. Early in 1946 it was \$180,000,000,000-almost $4\frac{1}{2}$ times as much as at the low point in the thirties. (2) Without the counterbalancing influence of an increased demand, mentioned above by Mr. Wald, the "price" obtainable for this extraordinary supply of money sank lower and lower.

The third and final factor which has a definite relation to and is an outgrowth of the increased money supply, is the expansion in various forms of savings-deposits in mutual savings banks, time deposits in commercial banks and life insurance in force. In Table V, on the following page are given data regarding these selected sources of investment funds for the years 1930-1945, each figure representing the annual change in each category in billions of dollars.

- (1) Haskell P. Wald, "The Expanded Money Supply and Economic Activity," "Survey of Current Business," May 1946.
- (2) Edson B. Smith, "The Investor." Boston Herald, April 5, 1946.

TABLE V
Selected Sources of Investment Funds (1)
 1930-1945 (Billions of Dollars)

	Assets of Life Ins. Companies	Deposits of Mutual Savings Banks, including Postal Savings	Time deposits of Commercial Banks	Total
1930	+1.4	+0.7	-0.2	+1.9
1931	+1.3	+0.9	-3.6	-1.4
1932	+0.6	+0.2	-1.7	-0.9
1933	+0.1	-0.1	-2.2	-2.2
1934	+1.0	+0.2	+1.2	+2.4
1935	+1.4	+0.1	+1.0	+2.5
1936	+1.7	+0.2	+0.9	+2.8
1937	+1.4	+0.1	+0.7	+2.2
1938	+1.5	+0.1	0	+1.6
1939	+1.5	+0.3	+0.5	+2.3
1940	+1.6	+0.2	+0.5	+2.3
1941	+1.9	-0.1	+0.1	+1.9
1942	+2.2	+0.2	+0.5	+2.9
1943	+2.8	+1.4	+2.9	+7.1
1944	+3.3	+2.2	+4.9	+10.4
1945	+3.5 (Estimate)	+2.6	+6.1	+12.2

(1) "Banking and Monetary Statistics," Federal Reserve Bulletins and 1944 reports of the Life Insurance Association of America.

As can be seen from the last column of the preceding table, there was an annual increase in the total of these three sources of investment funds for every year since 1933-further evidence of the overweighting of the supply of investment funds, which, as we have seen has been driving down interest rates.

Further consideration and discussion of the increase in savings and time deposits is beyond the scope of this paper but the upbuilding of the assets of life insurance companies which, in turn, creates a rising volume of funds to be invested by these institutions, may be classified as the second major problem of insurance companies during the past fifteen years. Although this problem is akin to and involved in the first one (declining interest rates) it is distinctive and important enough to require separate and more detailed comment at this point.

3. Increasing Amount of Life Insurance Funds Seeking Investment.

"The acorn grew and became an oak, but the oak is still growing." (1) At the end of 1945 total life insurance in force reached \$155,722,778,000 represented by 166,329,000 policies, compared with \$107,948,278,000 and 128,132,000 policies in 1930-an increase of over 46% and of almost 30%, respectively. (2)

- (1) "Distribution of Life Insurance Assets," Spectator, September 1946
- (2) Spectator Year Book

As can be seen from the last column of the preceding table,

there was an annual increase in the total of these three sources of investment funds for every year since 1933-1934. This evidence of the overabundance of the supply of investment funds, which, as we have seen has been driving down interest rates.

Further consideration and discussion of the in-

crease in savings and time deposits is beyond the scope of this paper but the upbuilding of the assets of life insurance companies which, in turn, creates a rising volume of funds to be invested by these institutions, may be classified as the second major problem of insurance companies during the past fifteen years. Although this problem is akin to and involved in the first one (declining interest rates) it is distinctive and important enough to require separate and more detailed comment at this point.

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(1) "Distribution of Life Insurance Assets," Spectator, September 1946
(2) Spectator Year Book

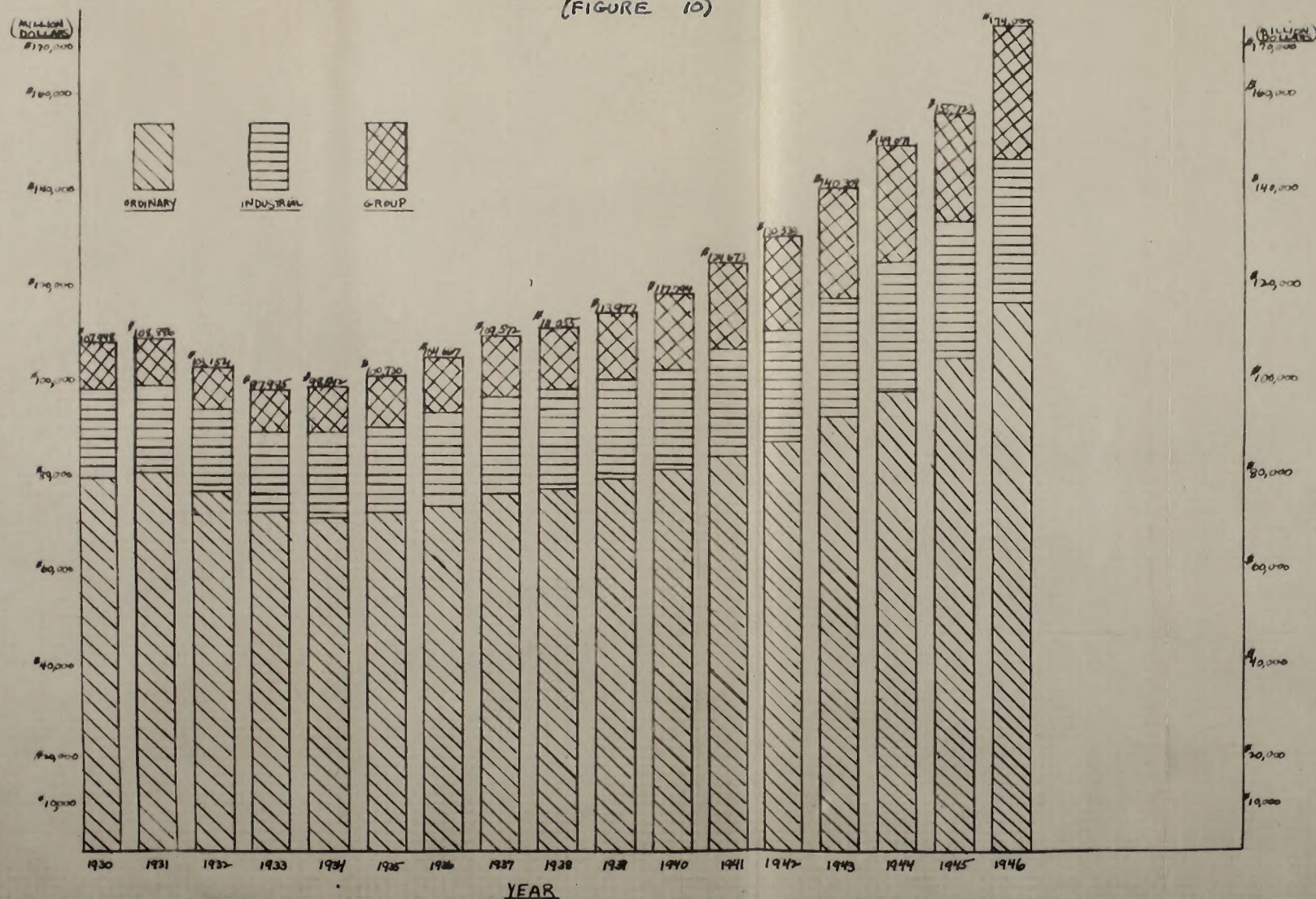
Gains in insurance business were even more spectacular in 1946. For the first four months of that year life insurance purchases increased 43% over the same 1945 period, (1) for the first six months sales were up 47%; (2) for the first ten months a gain of 54% was registered; (3) and for the entire year 1946, sales jumped 47% over the previous year. (4) Consequently, on December 31, 1946, total life insurance in force in the United States stood at the fantastic figure of approximately \$174,000,000,000, an increase of 10.3% over the former 1945 high (5) and almost double the depression low of \$87,945,000,000 in 1933.

Figure 10 shows the year-by-year growth in life insurance in force in the United States from 1930-1946 inclusive, by the three principal categories, ordinary, industrial and group.

The obvious result of this tremendous increase in insurance is a similar expansion in the assets of the insurance companies. From Table VI and Figure 11, it can be seen that the total assets of the United States life companies which were approximately \$18,880,000,000 in 1930 jumped \$25,917,000,000, or 137%, in the following fifteen years to a

- (1) Boston Herald, May 22, 1946
- (2) National Underwriter, July 19, 1946, Page 1.
- (3) Weekly Underwriter, November 23, 1940, Page 1258.
- (4) Dave E. Satterfield, Life Insurance Achievement 1946, Life Insurance Association of America, New York 1946, Page 2.
- (5) Life Insurance News Data, December 29, 1946, published by Institute of Life Insurance.

LIFE INSURANCE IN FORCE, BY TYPE
(U.S. COMPANIES) - 1930-1946
(FIGURE 10)



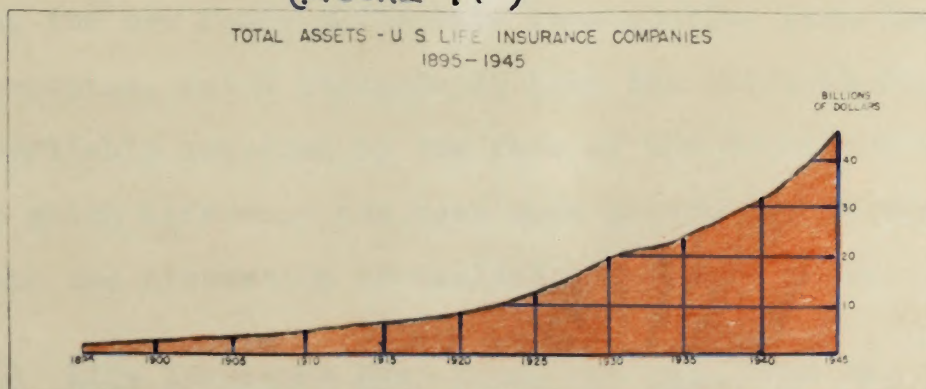
SOURCES: SPECTATOR YEAR BOOK, INSTITUTE OF LIFE INSURANCE, LIFE INSURANCE ASSOCIATION OF AMERICA

(TABLE VI)
Assets of U. S. Life Insurance Companies
1896-1945

1896	\$1,243,561,111	1921	\$ 7,936,496,844
1897	1,344,903,198	1922	8,652,318,490
1898	1,462,651,318	1923	9,454,620,793
1899	1,595,208,408	1924	10,394,034,380
1900	1,742,414,173	1925	11,537,614,609
1901	1,910,784,985	1926	12,939,806,809
1902	2,091,822,851	1927	14,391,850,583
1903	2,265,221,193	1928	15,961,093,741
1904	2,499,060,998	1929	17,482,308,607
1905	2,706,186,867	1930	18,879,611,097
1906	2,924,253,848	1931	20,159,939,830
1907	3,052,732,353	1932	20,754,112,108
1908	3,380,294,090	1933	20,895,726,259
1909	3,643,857,971	1934	21,843,793,869
1910	3,875,877,059	1935	23,216,495,614
1911	4,164,491,688	1936	24,874,316,359
1912	4,409,292,521	1937	26,249,049,219
1913	4,658,696,337	1938	27,754,660,541
1914	4,935,252,793	1939	29,243,411,498
1915	5,190,310,353	1940	30,802,154,598
1916	5,536,607,483	1941	32,730,965,100
1917	5,940,622,780	1942	34,931,411,348
1918	6,475,139,502	1943	37,766,395,509
1919	6,790,582,415	1944	41,053,973,888
1920	7,319,997,018	1945	44,797,041,217

Source: Spectator Year Book.

(FIGURE 11)



total of \$44,797,000,000 in 1945. Inasmuch as 87.4% (1) of this amount was represented by some type of investment, something of the magnitude of the investment problem of insurance companies can be seen.

As a matter of fact, American life insurance companies are the world's largest investors. (2) They hold a little more than one-half of the private long-term debt of the country today, compared to about one-fifth in 1930. (3) In one month alone in 1946 (July) they bought \$852,000,000 worth of investments to push the grand total to a record of \$41.7 billion. (4) Of the twenty-three vice presidents of the largest insurance company in America, (Metropolitan) six are responsible for supervising the vast and complex investments-another indication of the relative importance of this aspect of the business!

However, it has been not only a matter of investing the new funds which have been pouring into the insurance companies, but a struggle to keep the original funds profitably invested in the face of the ferocious refinancing to which reference has been made previously in connection with the discussion of declining interest rates. See Page 40.

- (1) Life Insurance Fact Book, op. cit. Page 42.
- (2) Investor's Reader, October 4, 1946, Merrill, Lynch, Pierce, Fenner & Beane, New York, New York. Page 1.
- (3) H. S. Payson Rowe, Address given before general agency leaders of John Hancock Mutual Life Insurance Company, September 16, 1946.
- (4) Ibid. Page 2.

PERCENT OF THE INCREASE IN BONDS & STOCK ACQUISITIONS
IN 1930, 1940 & 1945

A study of the six larger life insurance companies, the results of which are shown in Table VII, indicates that, in 1930, there was a net increase in the holdings of stocks and bonds equivalent to 71.3% of the total acquisitions of such securities; in 1940 and in 1945, the percentages were 34.1 and 34.8 respectively. In other words, only 28.7% of the bond and stock purchases in 1930 were required to offset the dispositions (calls, redemptions and sales,) whereas 65.9% and 65.2% of the investment effort in 1940 and 1945 respectively was expended in replacing securities disposed of for one reason or another. During 1946, a report compiled by the New York Trust Company indicates, 57% of all security offerings were for the purpose of refunding outstanding issues. (1)

4. Limitations Imposed by State Laws Specifying "Legal" Investments.

One final problem faced by the insurance companies is the matter of the restrictions imposed by most states on the type of investments which may be made by these institutions. Early in the 20th century the famous Armstrong investigation began its intensive inquiry into the character of insurance investments. This was the first public check on insurance portfolios. Prior to that time, the companies were free to finance all types of undertakings and enterprises, some of which turned out to be unsound and highly

(1) A Compendium of Major Corporate Financing for the Year 1946, Table II, New York Trust Co., N. Y.

PERCENT OF NET INCREASE IN BONDS & STOCKS ACQUIRED

TO TOTAL BONDS & STOCKS ACQUIRED

Six Large Life Insurance Companies - 1930, 1940, 1945

TABLE VII

	<u>1930</u>	<u>1940</u>	<u>1945</u>
Metropolitan	75.0	43.9	36.0
Prudential	71.8	44.7	53.3
Equitable	63.1	5.6	22.7
New York Life	70.7	49.6	26.2
Northwestern Mutual	63.0	60.2	44.9
John Hancock	57.4	64.5	35.5
	—	—	—
Total 6 Companies	71.3	34.1	34.8

Source: Annual Statements of Companies shown above.

speculative. As a result of this investigation, regulations, specifying the acceptable or legal types of insurance investments, were imposed which have changed drastically the character of the life insurance portfolios.

One of the current limitations which grew out of the Armstrong investigation is the restriction on the purchase of stocks, particularly common stocks, which, at one time, were an important source of investment for life insurance funds. In some states, purchases of common stocks are prohibited; in others they are limited to a small percentage of the total issue of a company and/or to a percentage of the insurance company's assets; in others the investment in certain types of stocks which are considered speculative or which are liable to assessment, is prohibited. For example, the Massachusetts statute provides that an insurance company may not acquire or hold more than 10% of the total stock (common and preferred) of any company and may not invest more than 10% of its own assets in a single enterprise; Wisconsin law likewise limits investment in any one corporation to 10% on insurance company's assets; Connecticut statutes forbid investment in stocks of mining companies; Idaho bans purchase of stock in oil or canning companies; and New York, which since 1906 had allowed no investments in common stocks by insurance companies, amended its regulations in 1928 to permit investment in preferred and guaranteed stocks of

(1) Joseph S. Sullivan, 22. *Am. Econ. Rev.* 1932.
 (2) *Id.*

corporations under certain conditions. (1)

The original recommendation of the Armstrong Committee forbidding entirely the inclusion of stocks in insurance portfolios was based on the arguments that, if an insurance company owned only a fractional part of the common stock of a corporation, it was at the mercy of the other stockholders; on the other hand, if its stock investment was large there would be a temptation and/or tendency to gain control of the other enterprise, a situation which would lead the insurance company into operations far afield from those for which it was chartered. Today the generally accepted view seems to be that expressed by Mr. Joseph Maclean:

The investment of a considerable proportion of the funds of a life insurance company in stocks would be unsuitable, but it is not necessary to prohibit such investments altogether. Life insurance companies are large investors, and can therefore afford to take a certain amount of risk, in return for a higher yield, on some part of their investments.. (2)

More will be said later on this subject when the portfolios of companies are analyzed and policies of certain institutions are discussed.

Another legal restriction, common to most states, is that which bars investment in real estate except that necessary for the conduct of its business or the enforce-

(1) Joseph B. Maclean, op. cit. Page 273.

(2) Loc. Cit.

ment of its legal rights under foreclosure provisions of its mortgage loans. (1) In general, property acquired by foreclosure, must be disposed of within a certain limited time unless an extension is granted by the insurance commissioners to prevent unnecessary loss.

Presumably these limitations were imposed to stress the advantages of mortgage loans where the mortgagee has a senior position to the owner of the property whose equity must be wiped out before the mortgagee takes a loss. (2) In recent years there has been a tendency toward liberalization of laws regarding the holding of income-producing real estate. These developments will be discussed more fully in the section dealing with changes and trends in investment policies of the life companies.

Typical of the restrictions on mortgage loans are the statutory provisions of New York which limit any one mortgage loan to 2% of total assets, and those of Louisiana where not more than 80% of assets may be invested in mortgages. (3) The most common statutory regulation regarding mortgage loans is that the loan will not exceed

(1) Joseph B. Maclean, op. cit. Page 268.

(2) Ibid. Page 269.

(3) Ibid. Page 277.

(1) Ibid. Page 277.

50% of the value of the property; New York specifies 66-2/3%; while one state goes as low as 40% of value. (1)

As mentioned by Mr. Joseph Maclean:

These and similar laws will, however, be small protection to companies which do not exercise a constant and forward-looking supervision of their investments.

Possibly the best type of regulation is that which specifies a restricted list of investments for a certain proportion of the funds, leaving the balance to be invested at the discretion of the company in securities not on the specified list which appear particularly attractive. The Massachusetts Law includes such a provision which requires three-fourths of the policy reserves of any domestic stock or mutual life company to be invested in securities meeting the requirements of Section 63, Chapter 175, ie., United States and Canadian Government bonds, municipal securities of the United States and Canada which meet certain requirements, high-grade railroad bonds (as defined in the statute,) bonds of operating electrical utilities in the United States, those of the American Telephone and Telegraph Company, first mortgage bonds of that company's operating subsidiaries, mortgage loans, policy loans and industrial liens and Home Office and certain other real estate. All other investments, including mortgage bonds of telephone companies, other than those mentioned above, United States and Canadian water and gas companies and

(1) Ibid. Page 277.

Canadian light and power utilities are classified as "not legal."

At first glance these requirements do not seem to be too stringent. The 25% for "non-legal" investments would seem reasonable and ample. However, figures compiled by the John Hancock Mutual Life Insurance Company, the fifth largest insurance company in the country, which are given in Tables VIII and IX reveal how difficult, perhaps impossible, it is going to be for most companies to fulfill the requirements of the law and still obtain a reasonable return on their invested funds. The John Hancock figures indicate that "legal" investments of that company amounted to 84.4% of the Policy Reserve on June 30, 1946. This is a decrease of 4.5% from December 31, 1945. The decrease is due largely to the acquisition in recent months of a large percentage of "non-legal" bond and stock investments, but the situation has been aggravated somewhat by sales and redemptions of "legal" securities. (1) Of total bonds and stocks acquired in 1945, but excluding U.S. Governments, only 30.1% were "legal" investments; for the first six months of 1946 that percentage had shrunk to a mere 11%! (2) The security disposals in the first six months of 1946 were 54% "legal" and 46% "non-legal."

Two other calculations which have been made, emphasize how critical this aspect of the investment situation

- (1) Robert D. Patterson, Percentage of "Legal" Investments to Policy Reserves, March 21, 1946 and November 14, 1946.
- (2) Loc. Cit.

LEGAL AND NOT LEGAL INVESTMENTS
OF JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY
June 30, 1946

TABLE VIII

INVESTMENT VALUE
(000 Omitted)

<u>INVESTMENTS</u>	<u>LEGAL</u>	<u>NOT LEGAL</u>
Government Bonds		
United States	699,637	\$ --
Canada	33,596	--
Total Governments	733,233	--
States Territories & Possessions Bonds		
United States	4,324	1,053
Canada	14,456	--
Total States	18,780	1,053
Political Sub. of States etc. Bonds		
United States	43,719	12,595
Canada	358	--
Total Political Subdivisions	44,077	12,595
Railroad Bonds	47,325	78,391
Public Utility Bonds		
United States	226,840	262,021
Canada	--	41,964
Total Public Utilities	226,840	303,985
Miscellaneous Bonds		
United States	--	95,186
Canada	--	15,231
Total Miscellaneous	--	110,417
Stocks	--	60,250
Total Legal or Not Legal Bonds and Stocks	1,070,255	566,691
% to Total Bonds and Stocks	(65.38%)	(34.62%)
Mortgages (Including Foreclosed Liens)	151,712	--
Policy Loans and Industrial Liens	59,537	--
Home Office and other Real Estate	17,759	74
Total all Investments	\$1,299,263	\$566,765
Policy Reserve June 30, 1946		\$1,538,882
% of Not Legal Investments to Policy Reserve		36.83%
% of Legal Investments to Policy Reserve		84.43%

Source: Percentage of "Legal" Investments to Policy Reserves,
Robert D. Patterson, John Hancock Mutual Life Insurance
Company.

BREAKDOWN OF "LEGAL" AND "NON LEGAL"

BONDS AND STOCKS ACQUIRED JANUARY 1 - JUNE 30, 1946

John Hancock Mutual Life Insurance Company

TABLE IX

	<u>LEGAL</u>	<u>NON LEGAL</u>
	---(000 Omitted)---	--- --
Government Bonds		
United States	\$50,102	\$ ---
States Territories & Possessions Bonds		
Canada	227	---
Political Sub. of States etc. Bonds		
United States	---	768
Railroad Bonds	7,412	22,793
Public Utility Bonds		
United States	7,259	14,247
Canada	---	32,127
Total Public Utilities	<u>7,259</u>	<u>46,374</u>
Miscellaneous		
United States	---	23,208
Canada	---	11,097
Total Miscellaneous	<u>---</u>	<u>34,305</u>
Stocks	---	16,358
	<hr/>	<hr/>
Total Legal or Non Legal Bonds and Stocks	\$65,000	\$120,598
% to Total Bonds and Stocks	(35%)	(65%)
Total Investments Acquired (Stocks and Bonds)	\$185,598	

(1) Robert D. Patterson, 32, 33.

(2) Joseph E. Macleod, 32, 33, Page 178.

has become for the largest life insurance company in Massachusetts. First, computations indicate that approximately 59.7%, or sixty cents out of every dollar of increase in admitted assets must be of "legal" classification in order to provide the 75% ratio of legal investments to Policy Reserves. (1) As mentioned in the preceding paragraph the percentage for 1945, excluding U. S. Government Bonds, was just about one-half of the required figure (30.1%) and, for the first six months of 1946 only a little less than one-fifth (11%) of the sixty cents required: Secondly, the margin of safety of 9.4% is equivalent to only \$145,100,000 so that the sale of \$150,000,000 worth of John Hancock's holdings of United States Government Bonds would drop that company below the 75% requirement. Recommendations for alleviating this situation will be discussed later in this paper.

The object of the various investment regulations of the states which have been considered thus far has been either to insure soundness and prevent speculation or to eliminate improper practices, such as the control of business enterprises foreign to the insurance field. (2) Both of these motives may be considered commendable or at least

(1) Robert D. Patterson, op. cit.

(2) Joseph B. Maclean, op. cit. Page 275.

legitimate. However, there is a third type of state regulation, the aim of which definitely is unreasonable and unfair. Such statutes seek to direct insurance funds into investments favored and supported by state legislative bodies. The outstanding example of regulation of this kind is the Robertson Law of Texas, which requires that three-fourths of the reserves on policies on lives of Texas residents shall be invested in specified securities of that state. (1) As a result of this law, many large insurance companies ceased writing policies in Texas, not because they couldn't find suitable investments there which would satisfy the law but because they didn't wish to submit to such arbitrary and dictatorial control of their investment portfolios. It is generally agreed that the Texas securities (and those of any other locality) which are suitable for investment will be sought out by the insurance companies; those which are not desirable should not be forced into their portfolios by politically-conscious legislators who may be completely unfamiliar with sound investment practice. (2)

(1) Ibid. Page 275.

(2) Ibid. Page 276.

D. Review of Work Done by Others

1. Books in Public Libraries

A survey of the archives of one of this country's outstanding public libraries brought to light an astonishing dearth of current literature specifically discussing the matter of life insurance investments. The information in the few books available was altogether too obsolete for this report.

2. More Up-to-Date Volumes in Insurance Libraries

A search through the library of the Investment Department and other departments of the John Hancock Mutual Life Insurance Company disclosed several volumes on specific types of investments (municipals, railroads, and public utilities) and a few on life insurance which included pertinent chapters or sections on investments. The most helpful of these books included the following from which much information has been drawn and included in this paper:

Bond Ratings as An Investment Guide

Gilbert Harold-1938

Life Insurance (Sixth Edition)

Joseph B. Maclean-1945

Best's Life Reports, (1931, 1936, 1941, 1946)

Alfred M. Best

The Spectator Insurance Yearbook-1946

Jordan on Investments (4th Revised Edition)

David F. Jordan-1941

The Metropolitan Life

Marquis James-1947

3. Newspapers, Periodicals, Pamphlets and Bulletins.

Generally speaking, however, there is but little current information on life insurance investment policies and trends in books published to date, so that the most valuable sources of such data have been newspapers, periodicals, miscellaneous pamphlets and occasional bulletins in which addresses, opinions and statements of leading life insurance executives and other investment experts have been reported. A complete listing of this literature is included in the Bibliography. Inasmuch as the titles of such documents are quite descriptive and self-explanatory, no detailed review of them appears necessary at this point. Appropriate credit to the various sources is given in footnotes appearing throughout this report.

E. Method of Approach

In developing this thesis, consideration will be given to the following topics:

- (1) Investment standards of life insurance companies.
- (2) Bond ratings and their use.
- (3) Analysis of investment portfolios of the larger companies for the last sixteen years.
- (4) Trends in life insurance investments as indicated by shifts in the proportion of various types of investments and grades of securities in portfolios of life companies 1930-1946.
- (5) Possible and potential developments in investment policies, practices and procedures.

II. Investment Standards and Tests

A. Principal Considerations

1. Conservatism

The one principle which characterizes investment policies of all life insurance companies is conservatism. In some instances, it might even be described as ultra-conservatism. One insurance company, in describing the operations of his investment department, stated the following functions. One is to AND TESTS the investments to protect and increase the policyholders' money. An insurance policy is a contract that must be kept. It is not speculative—we have to be conservative. (1) There seems to stand out in the above quotation, "protect and increase." It is not a question of "either...or" but of "both...and". If the insurance companies were charged only with the responsibility of protecting the policyholders' money, that would be a relatively simple proposition since it is in some secure and heavily guarded vaults and is kept until the policy matures. On the other hand, if investment officers had to think only of ways to increase to the maximum extent the funds entrusted to them by policyholders, and were not concerned or held accountable if losses occurred as a result of participation in certain speculative ventures

(1) Investors' Reader, October 4, 1948, Page 1

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The one principle which dominates investment policies of all life insurance companies is CONSERVATISM. In some instances, it might even be classified as ULTRA-conservatism! One insurance executive, in discussing the operations of his company, explained: "We have two big functions. One is to sell insurance, the other is to protect and increase the policyholders' money.....An insurance policy is a contract that must be kept. We cannot speculate-we have to be conservative." (1) Three words seem to stand out in the above quotation, "protect and increase." It is not a question of "either...or" but of "both...and". If the insurance companies were charged only with the responsibility of protecting their policyholders' money, that would be a relatively simple matter-just place it in some secure and heavily guarded vault and let it stand until the policy matures. On the other hand, if investment officers had to think only of trying to increase to the maximum extent the funds entrusted to them by policyholders-and were not concerned or held accountable if losses occurred as a result of participation in certain speculative ventures

(1) Investors' Reader, October 4, 1946. Page 1

which would have provided an excellent return if they had succeeded instead of failed-they would find it much easier to select outlets and uses for their investment monies. However, to protect and increase funds requires the ultimate in sound judgment, and unusual business acumen.

2. Security of Principal

Just what are the general requirements for a good investment from the point of view of a life insurance company. First and foremost is the element of security of principal. Now this is not measured solely by the protection or adequacy of a mortgage lien, although to be sure, the highest-grade investments and those demanding the highest prices, are generally considered to be those secured by a mortgage on a sufficient amount of fixed property to insure that the face value of the bonds is paid in the event that company issuing the bonds defaults on any terms or conditions of the loan so that the bondholder has to foreclose and sell the mortgaged property. Insurance companies are not interested in taking over control of a business; in fact the laws of most states prohibit them from doing so. Therefore, in measuring or determining the security of their principal, these institutions consider the ability of a company to meet its obligations, principal and interest payments, year by year,

in depression periods as well as during prosperity. (1) Their analyses are directed toward determining whether fixed charges, including interest on all debt to be outstanding and sinking fund payments have been covered by an ample margin in the years past, and whether the future earning of the prospective borrower will be sufficient during the life of the loan to pay these established annual expenses.

One factor of security which is sometimes overlooked or disregarded is the call price or redemption price of bonds and stocks. Generally speaking, an insurance company will not pay more for any security than it will get back in the event that the issuing company decides to pay off its indebtedness. (2) The terms of most bond and preferred stock issues provide that they may be redeemed at any time at the option of the company upon payment of a specified premium intended to compensate the security holder for the loss of interest he had expected to collect over the original life of the issue and the expense of reinvesting his funds. Obviously if an investor pays more for a bond (or stock) than he would receive if

- (1) H. S. Payson Rowe, "Safety Tests for Bond Investments" Trust Companies Magazine, December 1936.
- (2) David Durand, Basic Yields of Corporate Bonds 1900-1942 Technical Paper 3, National Bureau of Economic Research, New York, 1942.

the bond should be called or redeemed and paid before the excess of the purchase price over the call price had been amortized or charged off on the books of account, he would lose a portion of the original funds he had invested. Consequently, insurance companies steer clear of any bond or stock which would cost more than the current call price because the security of their principal would be jeopardized.

3. Reasonable Yield

The second fundamental consideration of investment departments of life companies, quite naturally, is a reasonable yield or return in income on their investment. As has been pointed out earlier, all insurance premiums are calculated on the assumption that a certain specified rate of interest will be earned on that portion of the premiums which are set aside in the Policy Reserve for payment of policies on maturity. Hence, an insurance company cannot allow its funds to lie around idle but must put them to productive use so that they will grow at a rate sufficient to maintain the reserves. As one writer puts it, "It is the duty of the company to choose its investments in such a way as to secure the highest yield consistent with safety, in order that it may furnish insurance to its policyholders at low cost." (1)

(1) Joseph B. Maclean, op. cit. Page 266.

In considering both security and yield, it should be pointed out that because of the volume and wide scope of a company's investments, some losses are inevitable over the years. However, by applying to investments the same principles of averages used in insurance, it is possible and feasible to set up a contingency or investment-fluctuation fund out of the profit on disposition of securities and out of the higher interest earnings on the less well-secured holdings. From this reserve any losses incurred on their investments may be made good. Thus it becomes possible for an insurance company to adopt a reasonably liberal investment policy-and this does not mean speculation-which would justify purchase of some securities not considered desirable or appropriate for an individual. (1)

4. Diversification

The final important consideration for insurance investments is diversification. During recent years when demand has exceeded supply, this requirement, of necessity, has been pushed considerably farther into the background than is normal. Insurance companies, however, do try to distribute their funds geographically and among different classes of investments, as well as among as wide a variety

(1) Joseph B. Maclean, op. cit. Page 266.

of industries as possible. The reasons for so doing are fairly obvious. It would be dangerous to concentrate too large a proportion of the investments in any one company, locality or industry or in a group of inter-related and inter-dependent industries since unfavorable economic conditions or other unfortunate and unforeseen events (the so-called "Acts of God") might wipe out the investment and place the insurance company in a precarious financial position. An accurate idea of how this principle of diversification has been carried out may be obtained from Table X which shows the investment figures for foreign investments as well as those for each section of this country, in dollars and as a percentage of the total, at the end of 1941 and 1945. An additional column indicates the percentage change in investments in the different areas between these two years.

TABLE X

INVESTMENTS OF 49 LIFE INSURANCE COMPANIES - BY GEOGRAPHIC DIVISIONS

Division *	1941 and 1945 - 000 Omitted		December 31, 1945		% Increase 1945 over 1941
	December 31, 1941 Amount	% of Total	December 31, 1945 Amount	% of Total	
New England	\$ 1,478,470	4.9	\$ 2,163,283	5.3	46.3
Middle Atlantic	8,056,869	26.9	9,393,185	23.2	16.6
East North Central	5,852,845	19.5	7,761,634	19.2	32.6
West North Central	3,013,915	10.1	3,629,046	9.0	20.4
South Atlantic	2,892,213	9.7	4,748,256	11.7	64.2
East South Central	1,468,798	4.9	2,295,366	5.7	56.3
West South Central	1,847,352	6.2	3,106,154	7.7	68.1
Mountain	763,594	2.6	1,149,487	2.8	50.5
Pacific	2,089,355	7.0	3,114,612	7.7	49.1
Territories & Possessions	8,801	-	11,843	-	34.6
TOTAL UNITED STATES	\$27,472,212	91.8	\$37,372,866	92.3	36.0
Canada	989,719	3.3	1,543,357	3.8	55.9
Other Foreign	58,628	0.2	68,497	0.2	16.8
Misc. - Allocated by Classes	812,128	2.7	469,949	1.2	-42.1
Misc. - Not Allocated by Classes	604,250	2.0	1,000,109	2.5	65.5
GRAND TOTAL	\$29,936,937	100.0	\$40,454,778	100.0	35.1

* The geographic divisions correspond with those used by the U. S. Bureau of the Census.

Source: Dave E. Satterfield, Jr., Life Insurance Achievement in 1946, Life Ins. Assoc. of Amer., N.Y., 1946

B. Specific Tests

1. Municipal Bonds

We come now to a consideration of the specific tests which insurance companies apply to the securities which they are contemplating purchasing.

Although municipal bonds are of relatively little interest to insurance companies at the present time because of the low rate of interest paid, mention will be made of five standards applied by one insurance company in judging their desirability. (1)

1. Overall debt not over 12% of assessed of assessed valuation of taxable real property.
2. Balanced budget for previous year and current operations on a cash basis.
3. Average tax collection record for past six years of 90%.
4. Community willing and able to pay.
5. Enforceability of the obligation.

The first three points are self-explanatory but the last two need to be amplified somewhat. The will of the community to pay is determined by its debt history. Have previous bond issues been paid or refunded on maturity? Have tax rates been increased when necessary to service the

(1) H. S. Payson Rowe, op. cit. Page 3.

debt? Have the community and its citizens exercised discretion and intelligence in the operation of municipal affairs? These are questions which may be asked to determine whether or not the community is acting in good faith in issuing the new bonds.

The ability of the municipality to pay may be judged by several factors-(1) its economic position, which involves a study of its importance as a trading center and the nature and diversification of its industry; (2) the nature of the city management, ie., political or business-like; (3) budgetary and accounting practices; (4) relationship of the community to the state; (5) relationship of assessed valuation to true value of real estate; (6) outstanding debt-per capita, distribution of maturities and adequacy of sinking funds; (7) reasonable operating costs; and (8) method of handling unemployment relief-covered out of current funds or met by borrowing. (1)

The enforceability of municipal securities seems to hinge on whether or not the bonds were duly authorized by the citizens. This matter has been receiving particular attention ever since a Texas community (Corpus Christi) claimed that some of its bonds had been issued without proper authority and defaulted on their payment a few years ago. To date no satisfactory settlement has been

(1) H. S. Payson Rowe, op. cit. Page 3.

agreed on by the bondholders and the city and the case is still being argued in the courts. Other instances of invalid and noncollectible municipal bonds have been caused by one or more of the following deficiencies: (1) purpose of issue outside the legitimate objectives for which bonds may be issued, (2) violation of minute technical requirements of the law, or (3) amount of issue in excess of legal debt limit. (1) So important is the matter of validity of municipal bonds that even experienced investors will buy only those bonds which have been approved by one of the fifty law firms in the country considered qualified to determine their legality. (2)

2. Public Utility Bonds

Public utility bonds, including those of water, gas, telephone and electric companies, are measured by an entirely different set of standards. Although the requirements differ for each type of utility the following tests are the principal ones used as general guides by one of the larger insurance companies: (3)

1. Ratio of mortgage debt to net value
(gross value less depreciation reserve)
of property

- (1) David F. Jordan, Jordan On Investments, op. cit. P. 318
- (2) Ibid. P. 319
- (3) John Hancock Mutual Life Insurance Co.

less than 65%. In the case of water companies a ratio of 70% is not considered excessive while a percentage of 50% for telephone companies and over 60% in the case of certain gas and other utilities might make the loan undesirable.

2. Net earnings, after taxes and an adequate allowance for depreciation and maintenance, equal to at least twice the total interest charges in each of the past five years. Depreciation and maintenance charges for telephone companies normally run from 25% to 30% of gross operating revenues in contrast to an average of about 15% for electric and gas utilities and even lower rates for water companies.

3. At least 20% of gross revenues should remain after payment of interest charges but before payment of taxes.

4. Inasmuch as most bond issues are now of the open-end type, terms of the indenture securing the bonds should set a limit on the amount of bonds that may be issued against property additions. In only rare instances (water companies, for example) will a rate

less than 65%. In the case of water companies a ratio of 70% is not considered excessive while a percentage of 80% for telephone companies and over 80% in the case of certain gas and other utilities might make the loan undesirable.

2. Net earnings, after taxes and an adequate allowance for depreciation and maintenance, equal to at least twice the total interest charges in each of the past five years. Depreciation and maintenance charges for telephone companies normally run from 25% to 30% of gross operating revenues in contrast to an average of about 15% for electric and gas utilities and even lower rates for water companies. 3. At least 20% of gross revenues should remain after payment of interest charges but before payment of taxes.

4. Inasmuch as most bond issues are now of the open-end type, terms of the indenture securing the bonds should set a limit on the amount of bonds that may be issued against property additions. In only rare instances (water companies, for example) will a rate

of additional bonds to new property in excess of 70% of cost or fair value of the additional property be justified. A figure of 66-2/3% or even 60% is considered preferable.

5. Rates must be reasonable and in line with those of comparable utilities. Excessive rates indicate that a company is vulnerable to rate cuts, either as the result of public agitation or the ruling of state public utility commissions.

6. A sinking fund which will retire all or part of the issue by maturity is highly desirable. In the case of natural gas and other companies where the source of supply is limited, such a sinking fund is essential and must provide for a complete pay-out of the bonds by maturity.

7. Funded debt should be less than four times gross revenues.

8. Funded debt should be less than 60% of total capitalization. Capitalization as used here includes funded debt, capital stock and surplus.

9. There should be adequate diversification

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8. Funded debt should be less than 60% of total capitalization. Capitalization as used here includes funded debt, capital stock and surplus.

9. There should be adequate diversification

of load between residential, commercial, industrial and municipal revenues. A utility with high percentage of its revenues coming from industrial business which is subject to the severe cyclical fluctuations of business conditions is considered in a much weaker position than one where the bulk of the revenues come from the more profitable domestic or residential field. On the basis of total figures for the leading electrical utilities in the United States, the percentage of revenues obtained from each source in 1945 was as follows. (1)

Domestic (Residential)	34.9%
Distinctly Rural	2.7
Commercial	25.5
Industrial	30.0
Municipal	2.3
Miscellaneous	4.6
<u>Total</u>	<u>100.0%</u>

Obviously these percentages are only a guide and many of the stronger companies may have entirely different ratios due to unusual factors or circumstances existing in the communities they serve or because of the nature of their operation. The main point is,

(1) Moody's Public Utility Manual, 1946

however, that any utility with a high percentage of industrial business should be carefully scrutinized to ascertain whether the load will be maintained at the same high level during depression as well as in prosperity.

10. The company must be protected by franchises authorizing it to operate in the communities it serves. These should extend beyond the life of the bonds or there must be some indication or assurance, based on past experience and the actions of the local authorities and public service commissions, that they will be renewed or extended upon expiration.

11. Consideration should be given to the actual or potential competition from other utilities especially power projects of the Federal Government. In certain sections of the West and Southwest, the threat of competition from government power developments is very real and must be closely analyzed and watched.

12. The trend of the company's business, as indicated by the increase in the number of customers and the average number of kilowatt hours used annually per customer, gives an indication of the management's ability in load

building. Any decline or a less than normal increase in these items provides a danger signal that there may be something inherently faulty in the company's territory or operations.

3. Railroad Bonds

Evaluation of railroad bonds is an even more difficult and complicated matter due in part to the involved debt structure of most roads. One of the financial officers of the John Hancock Life Insurance Company feels that "there is no probability of loss" if railroad investments are limited to first mortgage bonds on "main line mileage of a railroad property that has economic justification" for the indefinite future. (1) Other tests for railroad bonds outlined by this experienced investor include the following:

1. Ratio of funded debt to total capitalization not over 50%. Those roads which have maintained such a ratio have made the best showings during lean periods.
2. Earnings sufficient to cover all interest charges in each of the past fifteen years after adequate allowance for maintenance has been made.
3. Satisfactory traffic density.

(1) H. S. Payson Rowe, Safety Tests for Bond Investments, op. cit. P. 5.

Other points which must be considered and compared with other Class I roads are: (1)

1. Physical factors-location of mileage, amount of double track, weight of rail, amount of equipment owned
2. Operating statistics-character of traffic, average haul and rate received, car mile operating costs, train mile figures.
3. Financial factors-trend of operating revenues, average revenue per ton-mile, nature and amount of other income, ratio of maintenance charges to gross earnings, and the relative amount and trend of transportation expense.
4. Political factors-labor costs and freight rates.

4. Industrial Bonds

In the industrial field there is such a wide variation in operating and balance sheet ratios between companies in different lines of business that the generally accepted investment standards must be applied carefully with due consideration being given to peculiar circumstances which may exist in some industries. The basic tests for

(1) H. S. Payson Rowe, op. cit. P. 5.

Industrial Bonds used by the John Hancock Mutual Life Insurance Company are :

1. Net income, after proper allowances for depreciation and depletion, shall have been over four times pro-forma interest charges in nine out of the last ten years.
2. Working capital (current assets minus current liabilities) at time of issue of new bonds equal to total amount of funded debt to be outstanding. Provision should be made in the indenture securing the issue for the maintenance of working capital in the same ratio throughout the life of the bonds.
3. Maturity preferably not over twenty years.
4. Sinking fund capable of retiring at least one-half of the issue by maturity.
5. Market value of the equity (as previously defined) at least equivalent to twice the funded debt to be outstanding.
6. Net value of property plant and equipment at least twice the pro-forma funded debt.

In addition to the above financial tests, a careful study is made of the reputation, efficiency and general capability of the top executive staff. Reports from credit agencies, checkups with banks and personal interviews of the

men themselves are all used in an effort to determine whether management of the company issuing the securities is unquestionably sound. Inasmuch as most industrial earnings are subject to wide fluctuations, as between periods of prosperity and depression, investments are preferred in those companies whose managements follow the policy of paying off indebtedness as rapidly as possible.

Generally speaking, insurance companies will consider only the securities of large companies with a record of profitable operations extending back fifteen or more years. The reason for this is twofold; firstly, only the larger companies are capable of floating the large issues which are of interest to insurance companies; and, secondly; the standards of these institutions are so high, as outlined above, that an industrial concern must have an impressive and stable sales volume and must be unusually strong financially to measure up to them. Companies producing a well-advertised and generally-accepted product are preferred to those whose merchandise is little-known. Likewise industries with a large capital investment in relation to funded debt, such as steel and oil companies, are looked on more favorably than those whose ratio of fixed capital to funded debt is relatively low. (1) Finally, flexibility of output and ability to take advantage

(1) H. S. Payson Rowe, op. cit. P. 6.

of rapidly changing technological and economic conditions in the industry are construed as indications of the type of enterprise in which a life company should invest its funds. (1)

5. Preferred Stocks

If the standards for bond investments are high, preferred stock qualifications are even more difficult to meet. Here are the financial tests applied by the John Hancock to preferred stock offerings of public utilities and industrial concerns:

A. Public Utility

1. Funded debt plus preferred stock not over 80% of minimum sound value of property. In determining this ratio it is especially important to eliminate from the property account any appraisal write-ups which may have been brought on to the books in past years. This not so difficult now as it was some years ago inasmuch as most state utilities commissions have required companies under their jurisdiction to state the value of their fixed property at "original cost when first devoted to the public service."

(1) Loc. cit.

2. Income available for fixed charges after taxes at least one and three-fourths times total pro-forma interest charges plus preferred dividend requirements in each of the last five years and at least one and one-half times such charges and preferred dividends in each of the last ten years.

3. Percentage of gross operating revenues remaining after interest and preferred dividends but before taxes at least 20%.

B. Industrial companies

1. Pro-forma preferred and funded debt requirements covered at least four times for the last seven-year average, at least three times for last fifteen-year average, and at least once in the poorest of the last fifteen years.

2. Common stock equity at least three times the funded debt plus preferred stock.

3. Sinking fund to retire 2% of the issue annually.

4. Restrictions against the creation of senior issues.

5. Provision for cumulative dividends.

6. Common Stocks

Occasionally an insurance company buys an unusually high-grade common stock of some outstanding and well-known company. To warrant consideration, the issuing company must have a conspicuous earnings record for the past fifteen years, the price-times-earnings ratio must be reasonable (about 10 to 15, depending on the type of company and other factors,) and there must be adequate asset support for the stock. In connection with this last item, any common stock which is selling much above the net value per share of the assets supporting it will not be given further consideration by most insurance companies.

All of the general comments regarding the character, type of business, quality of management, and so forth of the issuing companies which were made in the section covering bond tests are of course equally applicable to companies whose preferred and/or common stocks are being analyzed and studied with an eye to possible investment therein. No standards have been given for railroad stocks inasmuch as the quality of most such securities is not high enough at present to warrant investment by the life companies.

Although the investment qualifications for both bonds and stocks which were given above are largely those

used by the John Hancock Mutual Life Insurance Company of Boston, Massachusetts, they may be considered comparable to and typical of those applied by the other large insurance companies.

7. Real Estate Mortgages

Inasmuch as mortgages on farm and city real estate constituted over $13\frac{1}{2}\%$ of the assets of twenty-two of the larger insurance companies on December 31, 1945, a few words regarding the qualifications of such investments from an institutional point of view are in order. The basic requirement for both farm and city mortgages is the determination of property value through competent appraisal.

Until about fifteen or twenty years ago, valuation of farm property were based largely on the cost price less depreciation, or on prevailing values of similar properties from the point of view of location, condition and use. (1) However, as a result of the unfortunate experience with farm loans during the early 1930's, appraisal methods based upon earning power have been developed for farm property. (2) To determine earning power, the first step is to apply normal price averages to the yields for the past several years. Then

(1) David F. Jordan, op. cit. Pp. 433 and 443.

(2) Loc. cit.

other factors such as neighborhoods, roads, schools, churches, proximity to markets and suitability to multiple-line farming are given appropriate weight. (1)

In appraising residential city property, particular attention is paid to the type and manner of construction. A well-built home depreciates at the rate of 2% to $2\frac{1}{2}\%$ annually, whereas one which has been cheaply constructed has an estimated life of only 25 years and a depreciation rate of 4% annually. The possibility of declining, or improving value due to neighborhood changes is also important. (2) In the case of commercial buildings, earning power is carefully computed and has an important place in the appraisal just as it does in farms. In the past, considerable difficulties have arisen because these estimates of earning power failed to take into consideration such factors as vacancies, carrying charges and possible rent reductions caused by poor business conditions, but particular attention is being given now to such items. (3) Type of construction and adaptability of the property to different uses are also significant considerations. The traditional view is that a good mortgage should not exceed two-thirds of the fair market value of the property, as determined by the appraisal methods

(1) David F. Jordan

(2) Op. cit. P. 444

(3) Loc. Cit.

mentioned on previous page. (1) However, in recent years the rather valid argument has been advanced that the margin of safety on home mortgages should vary with the value of the property. (2) In fact F.H.A. mortgages have been issued on such a basis: (3)

1. Twenty-five year amortized loans on homes valued at \$6,000 or less, 90% of value, maximum of \$5400.

2. Twenty-year amortized loans on homes valued between \$6000 and \$20,000, 80% of value.

3. Twenty-year amortized loans on apartment buildings and residential sub-divisions, 80% of value, maximum \$4,000,000.

On the other hand long-term mortgage loans on farms generally should not exceed 50% of appraised fair market values in times of prosperity, inasmuch as land values are subject to declines of as much as 30% to 40% in depression periods. Granting of farm mortgages in excess of 50% of value, therefore, would constitute more of a speculation than a sound investment. (4)

(1) David F. Jordan, op. cit. P. 440.

(2) Ibid. P. 446.

(3) Jordan, op. cit. P. 439.

(4) Ibid. P. 443

As can be seen from the previous discussion, the key to all mortgage lending is the appraisal of the property. Even by using the "earning power" method, there appears to be grave danger of over-valuation when, as at the present time, we are coasting along happily and serenely at or near a peak in the business cycle. As a matter of fact, there is considerable anxiety in some quarters today over the outcome of the mortgage loans being made on the basis of highly-inflated property values. In the event that foreclosure becomes necessary, it is felt that investors, including some insurance companies, will find it difficult, if not impossible to liquidate fully their loans.

C. Bond Ratings

1. Use

As a further aid in the evaluation of bonds, there are available the ratings applied to most public issues by the Fitch, Moody, and Standard and Poor services. Since each security is very carefully studied by their professional investment analysts to determine its quality, considerable weight and value may be attached to the ratings given. The grading of bonds in this manner is especially helpful in making a quick comparison of two or more issues that appear on the surface to be of about the same quality.

However, the fact that these ratings are limited to the time when they are originally determined, are being revised constantly, and are subject to change without notice, indicates that they must be used with extreme caution. (1)

2. Key to Symbols Used

The significance of the various ratings used by the Moody's Investors Service is as follows: (2)

Aaa-Bonds of the best quality which carry the smallest degree of investment risk and which are generally referred to as "gilt edge." Interest payments are protected by a large or by an exceptionally stable margin and principal is secure. While the various protective elements are likely to change, such changes as can be visualized are most unlikely to impair the fundamentally strong position of such issues.

Aa-Judged to be of high quality by all standards and together with the Aaa group they comprise what are generally known as high-grade bonds. They are rated lower than

- (1) David F. Jordan, Jordan on Investments, op. cit. P. 109
 (2) Moody's Bond Record, December 5, 1941. P. 5.

the top quality bonds because margins of protection may not be as large, fluctuation of protective elements may be of greater amplitude, or the presence of other elements makes the long-term risk appear somewhat greater than in Aaa securities.

A-Bonds which possess many favorable investment attributes and which are to be considered as higher medium-grade obligations. Security of both principal and interest is assured but factors are present which indicate possible impairment in the future.

Baa-Considered to be lower medium grade obligations, ie., neither highly protected nor poorly secured. Interest payments and principal security appear adequate for the present but certain protective provisions either may be lacking entirely or may be of little value at some time in the future. Bonds with this rating not only lack investment qualities but possess speculative elements also.

Ba-Future of these bonds not well assured because of presence of speculative elements. There may be only moderate protection of interest and principal payments. Uncertainty of position characterizes bonds of this grade.

B-Characteristics of a desirable investment generally are absent. There may be but small assurance that payments of interest and principal will be made over a long period of time. The possibility is also present that other terms of the contract may not be adhered to in the long run.

Caa-Issues of poor standing, possibly in default or with elements of real danger with respect to interest and principal payments.

Ca-Highly speculative securities. Often are those in default or those with other important deficiencies.

C-Bonds with extremely poor prospects of attaining any real investment standing.

In order to show the relationship between the symbols of the principal rating agencies the following tabulation is presented: (1)

- (1) Gilbert Harold-Bond Ratings as An Investment Guide
Ronald Press Company, New York, N. Y. 1938, P. 75.

<u>Moody</u>	<u>Fitch</u>	<u>Poor</u>	<u>Standard</u>	<u>Majority Interpretation of Significance</u>
Aaa	AAA	A**	A1+	Highest
Aa	AA	A*	A1	High
A	A	A	A	Sound
Baa	BBB	B**	B1+	Good
Ba	BB	B*	B1	Fair
B	B	B	B	Somewhat Speculative
Caa	CCC	C**	C1+	Speculative
Ca	CC	C*	C1	Highly Speculative
C	C	C	C	Extremely Speculative
-	DDD	D**	D1+	Low or Weak
-	DD	D*	D1	Small or Very Weak
-	D	D	D	Practically Valueless

III. Analysis of Investment Portfolios

A. Major Asset Classifications

1. Increases in Various Classes of Assets

Having discussed the ultra-conservative which characterizes the investment policies and standards of life insurance companies, SECTION III now turn our attention to a study of ANALYSIS OF INVESTMENT PORTFOLIOS of these institutions in order to see how these policies have been translated into action in the investment of approximately \$48,000,000,000-the total admitted assets of all United States companies at the end of 1945. (1) The breakdown into broad categories of the investments of forty-nine United States legal reserve companies which held about 90% of these assets is shown, for the years 1930, 1935, 1940 and 1945, in Table XI on the following page.

Several definite trends are revealed in the following figures. First, the volume of mortgage investments has declined substantially from almost \$7,000,000,000 in 1930 to about \$5,000,000,000 at the end of 1945. The latter figure however, represents a gain of about \$1,000,000,000 over the low point in 1935. As is well known, the holdings of government bonds surged upward and the total for the forty-nine companies studied jumped from a little over \$1,000,000,000 in 1930 to over \$21,000,000,000 in 1945. During the seventeen-

(1) Betterfield, op. cit., p. 31

III. Analysis of Investment Portfolios

A. Major Asset Classifications

1. Increases in Various Classes of Assets

Having discussed the ultra-conservatism which characterizes the investment policies and standards of life insurance companies, let us now turn our attention to a study of the composition of the investment portfolios of these institutions in order to see how these policies have been translated into action in the investment of approximately \$48,000,000,000-the total admitted assets of all United States companies at the end of 1946. (1) The breakdown into broad categories of the investments of forty-nine United States legal reserve companies which held about 90% of these assets is shown, for the years 1930, 1935, 1940 and 1945, in Table XI on the following page.

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(1) Satterfield, op. cit. P. 11

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(1) Gatterfeld, op. cit. p. 11

TABLE XI
Analysis of Admitted Assets-Forty-nine Legal Reserve Insurance Companies (2)

<u>Type of Asset</u>	<u>(000,000's) omitted</u>				<u>% Change 1930-1946</u>
	<u>1930</u>	<u>1935</u>	<u>1940</u>	<u>1945</u>	<u>1946</u>
Mortgages	\$6992	\$4952	\$5339	\$5702	\$5925
Government Bonds	1325	4374	7839	20641	21550
Corporate Bond and Stocks	5165	5835	8961	10012	11975
Real Estate	405	1752	1827	729	625
Policy Loans and Premium Notes	2503	3189	2748	1716	1635
Cash	124	762	944	615	575
Other Admitted Assets	733	521	591	1040	915
TOTAL	\$17247	\$21385	\$28249	\$40455	\$43200
					+ 24.8
					+ 150.5%

Source: Life Insurance Achievement 1946, Dave E. Satterfield, Jr.

year period, investments in corporate bonds and stocks increased 131.8%; cash, 363.7%; real estate owned, 54.3%; and other admitted assets, 24.8%. The only class of assets, other than mortgages, which registered a decline in this time was the group known as Policy Loans and Premium Notes which was off 34.7% in 1946 compared with 1930.

2. Relative Importance of Various Asset Groups

In order to get a clearer view of these changes, Table XII, in which the absolute, or dollar figures, have been converted into indices representing the percentage of each of the items to the total admitted assets for each year, is presented on the following page.

From Table XII, the decline in the relative importance of mortgages is more clearly seen. Although investments of this type amounted to over 40% of the total admitted assets in 1930, ranking first in importance, they had dropped to third place in 1946 when they constituted only 13.7% of the total assets. Their position at the top of the list was taken by government bonds representing approximately 50% of all admitted assets at the end of 1946, compared with 7.7% in 1930. Although Table XI indicated a growth of 131.8% in holdings of corporate securities during the seventeen-year period, Table XII on the following page reveals that this class of investments actually declined somewhat in relative importance during this time (29.9% of admitted assets in 1930, 27.7% in 1946). Policy Loans and Notes tumbled from 14.5% to

TABLE XII

Analysis of Admitted Assets-Forty-Nine Legal Reserve Insurance Companies(As Percent of Total Admitted Assets)

<u>Type of Asset</u>	<u>1930</u>	<u>1935</u>	<u>1940</u>	<u>1945</u>	<u>1946</u>
Mortgages	40.5	23.2	18.9	14.1	13.7
Government Bonds	7.7	20.5	27.7	51.0	49.9
Corporate Bonds					
and Stocks	29.9	27.2	31.8	24.8	27.7
Real Estate	2.4	8.2	6.5	1.8	1.5
Policy Loans and					
Premium Notes	14.5	14.9	9.7	4.2	3.8
Cash	0.7	3.6	3.3	1.5	1.3
Other Admitted Assets	4.3	2.4	2.1	2.6	2.1
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

Source: Life Insurance Achievement 1946, Dave E. Satterfield, Jr.

3.8%, while Real Estate and Other Admitted Assets declined 2.4% and 4.3% to 1.5% and 2.1% respectively. Cash, which on the basis of the dollar figures increased about 363%, shows only a growth from 0.7% to 1.3% in relative importance. Detailed discussion of these various changes will be reserved for a later section of this report after additional figures and some charts have been presented to throw further light on this kaleidoscopic investment scene.

B. Detailed Review of Composition of Portfolios

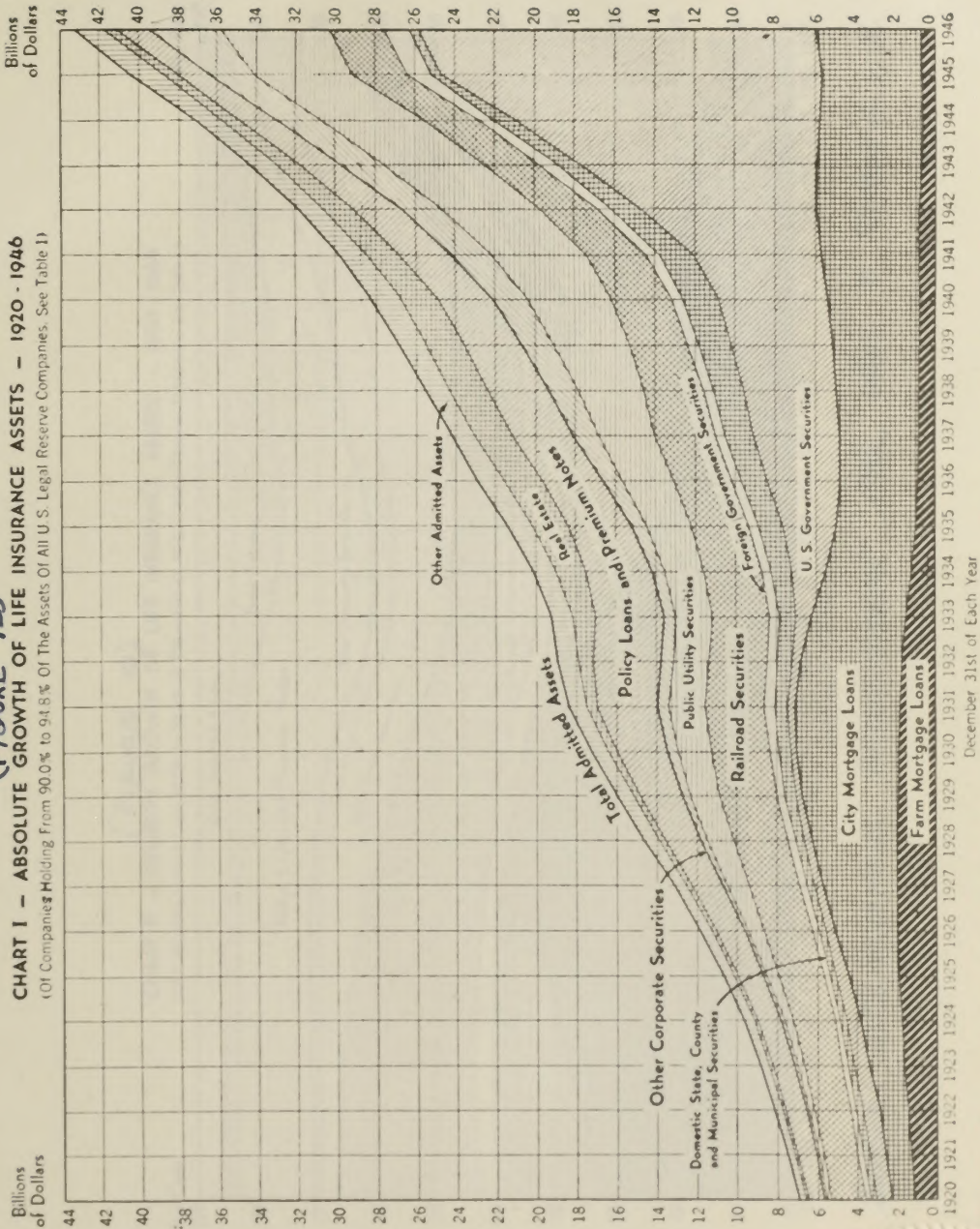
1. General Comments on Charts and Tables

Figures 12 and 13, and Table A (appendix) not only show the general changes referred to above but also furnish breakdowns of the mortgage, government bond, and corporate securities of the forty-nine companies. Figure 14 depicts in a slightly different manner the division of the principal items of the twenty-two larger life companies as a percentage of ledger assets. Finally, to emphasize more definitely the year-by-year changes in investments, free from the influence of prior holdings, Table XIII^{and} Figure 15 are presented. These show acquisitions of various types of securities for the years 1930, 1940, 1945 and 1946.

2. Government Bonds

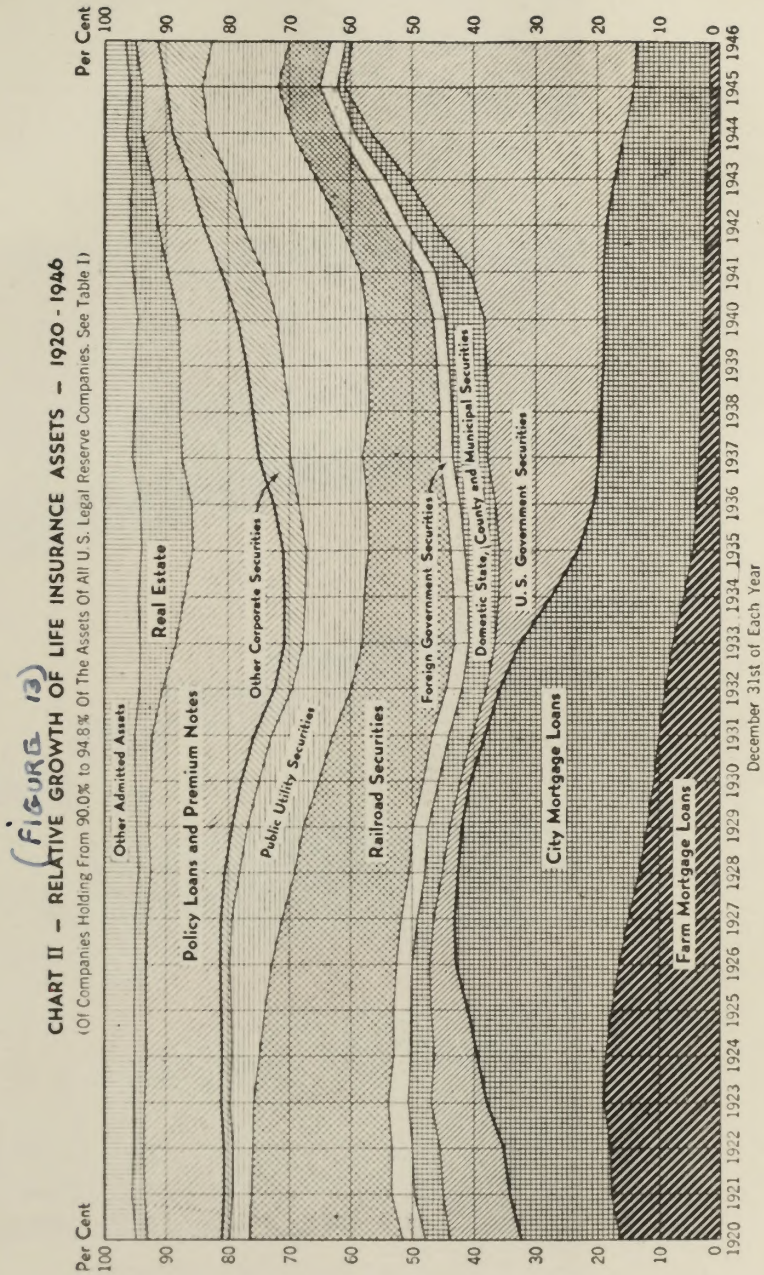
In the classification of government bonds are three principal types-United States Government Bonds, Foreign Government Bonds and State, County and Municipal Securities.

CHART I - ABSOLUTE GROWTH OF LIFE INSURANCE ASSETS - 1920 - 1946
 (Of Companies Holding From 90.0% to 94.8% Of The Assets Of All U. S. Legal Reserve Companies. See Table 1)



SOURCE: LIFE INSURANCE ACHIEVEMENT 1946, DAVE B. SATTERFIELD, JR.





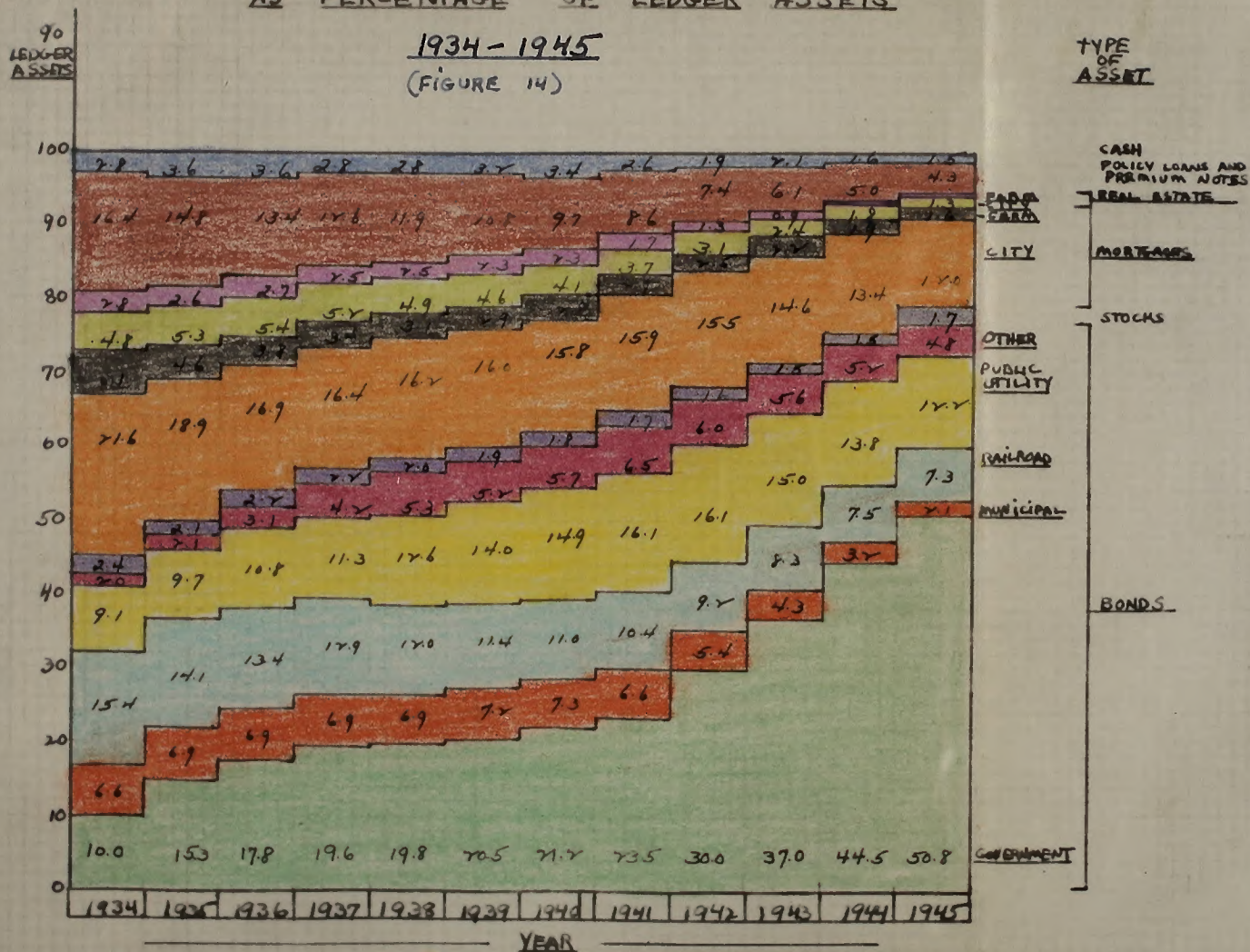
SOURCE: LIFE INSURANCE ACHIEVEMENT 1946, DAVID E. SATTERFIELD, JR.

DIVISION OF PRINCIPAL ASSET ITEMS

TWENTY-TWO LARGER LIFE INSURANCE COMPANIES

AS PERCENTAGE OF LEDGER ASSETS

1934-1945
(FIGURE 14)



SOURCE: ANNUAL STATEMENTS OF TWENTY-TWO LIFE INSURANCE COMPANIES

PERCENT OF EACH TYPE OF BOND & STOCK ACQUIRED
TO TOTAL ACQUISITIONS OF SUCH SECURITIES

Six Larger Life Insurance Companies - 1930, 1940 & 1945

TABLE XIII

	<u>1930</u>	<u>1940</u>	<u>1945</u>	<u>Difference</u> <u>1930-1945</u>
<u>BONDS</u>				
<u>Governments</u>				
United States	5.2	40.6	69.4	+ 64.2
Canada	0.5	1.6	2.9	+ 2.4
Total Government	5.7	42.2	72.3	+ 66.6
<u>Municipal</u>				
United States	NA	3.8	—	
Canada	NA	1.9	0.4	
Total Municipal	14.8	5.7	0.4	- 14.4
<u>Corporate</u>				
Railroad	23.0	11.9	8.1	- 14.9
Public Utility	25.6	19.4	8.9	- 16.7
Industrial & Misc.	12.9	20.7	9.3	- 3.6
Total Corporate	61.5	52.0	26.3	- 35.2
<u>TOTAL BONDS</u>	82.0	99.9	99.0	+ 17.0
<u>STOCKS</u>				
Railroad	2.3	—	0.2	- 2.1
Public Utility	4.9	—	0.3	- 4.6
Industrial & Misc.	10.8	0.1	0.5	- 10.3
<u>TOTAL STOCKS</u>	18.0	0.1	1.0	- 17.0
<u>TOTAL ALL BONDS &</u> <u>STOCKS</u>	100.0	100.0	100.0	—

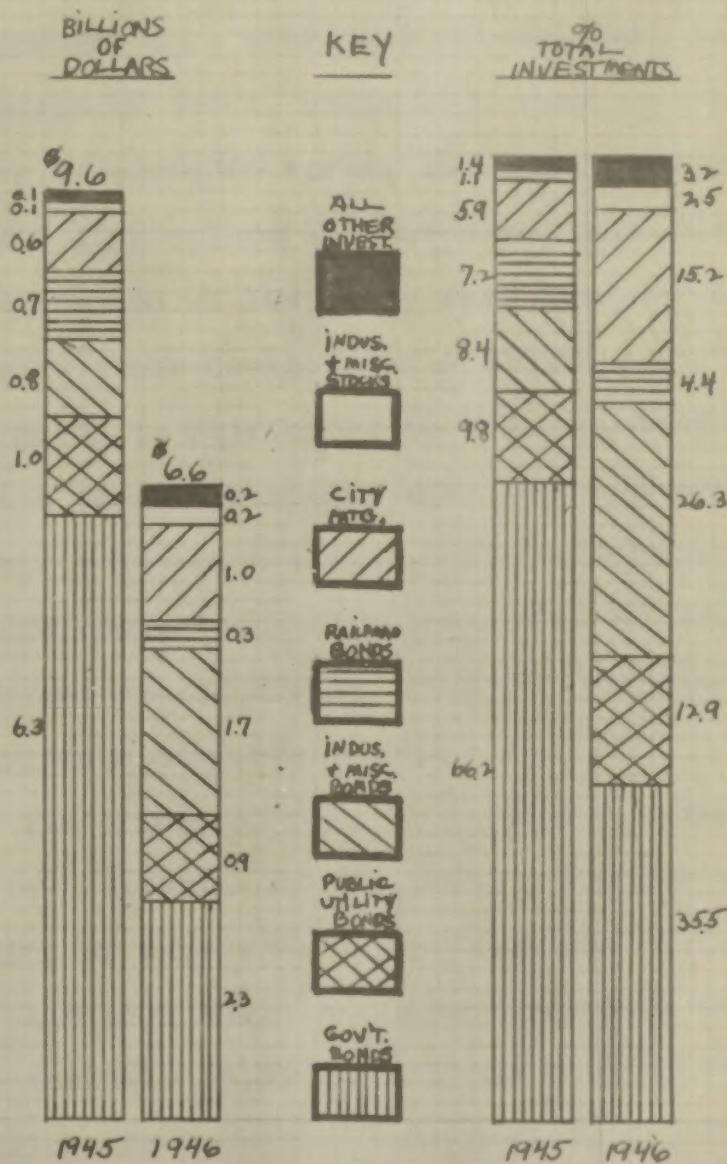
Source: Annual Statements of Metropolitan Life, Prudential Life, Equitable Life, New York Life, Northwestern Mutual and John Hancock for years indicated.

PERCENT OF EACH TYPE OF BOND & STOCK ACQUIRED
TO TOTAL ACQUISITIONS OF SUCH SECURITIES
Six Largest Life Insurance Companies - 1930, 1940 & 1945
TABLE XIII

<u>TOTAL ALL BONDS & STOCKS</u>				
<u>STOCKS</u>				
100.0	100.0	100.0	100.0	—
<u>TOTAL STOCKS</u>				
18.0	0.1	1.0	- 17.0	
Industrial & Misc.	10.8	0.1	0.2	- 10.3
Public Utility	1.9	—	0.3	- 1.6
Railroad	2.3	—	0.2	- 2.1
<u>BONDS</u>				
82.0	99.9	99.0	+ 17.0	
<u>TOTAL BONDS</u>				
61.5	52.0	26.3	- 35.2	
Total Corporate				
Industrial & Misc.	12.9	20.7	9.3	- 9.6
Public Utility	25.6	19.4	8.9	- 16.7
Railroad	23.0	11.9	8.1	- 14.9
<u>Municipal</u>				
11.8	5.7	0.4	- 11.4	
Total Municipal				
Canada	NA	1.9	0.4	—
United States	NA	3.8	—	—
<u>Government</u>				
5.7	12.2	72.3	+ 66.6	
Total Government				
Canada	0.2	1.6	2.9	+ 2.4
United States	5.2	10.6	69.4	+ 64.2
<u>BONDS</u>				
1930	1940	1945	<u>Difference 1930-1945</u>	

Source: Annual Statements of Metropolitan Life, Prudential Life, Equitable Life, New York Life, Northwestern Mutual and John Hancock for years indicated.

COMPARISON OF INVESTMENTS OF
FORTY-TWO MAJOR LIFE INSURANCE
COMPANIES - - 1945 AND 1946
 (FIGURE 15)



SOURCE: WALL STREET JOURNAL, JAN. 6, 1947

In 1930, the forty-nine legal reserve insurance companies which have been used as a basis for most of these analyses, held a little over \$585,000,000 bonds of domestic States and political subdivisions thereof. This represented about 3.4% of their total admitted assets. Investments in this type of bonds increased slowly, both in dollars and percentage of total, until 1940 when portfolios included \$1,777,000,000 worth, or 6.3% of assets. Thereafter both dollar volume and the percentage have dropped so that at the end of 1946 they were \$440,000,000 and 1.0% respectively. This decrease of a little over 75% in the last five years is attributed to the fact that the high prices which these securities have been demanding recently, due to their tax-exempt status, have made them unattractive to insurance companies. (1) Under Federal income tax laws their tax-exempt status offers no particular advantage to insurance companies. (2)

The principal kind of foreign government bonds included in portfolios of insurance companies are those of the Dominion of Canada and political subdivisions of that country. Although their relative importance has not increased markedly (2.3% in 1930 and 2.9% in 1946), the total holdings of Canadian Government bonds, including those

(1) Satterfield, op. cit. P. 6.

(2) Loc. cit.

of provinces and other subdivisions, jumped from about \$404,000,000 in 1930 to \$1,227,000,000 in 1946, an increase of over 203%! This growth is an indication of the strong support which United States insurance companies gave to the Canadian war effort. In recent years, the amount of bonds of other foreign governments held by domestic insurance companies has been negligible. Ever since 1920, when the institutions held about \$139,000,000 (2.6% of assets) of foreign government bonds, the holdings have been shrinking steadily and quite rapidly until at present only about \$8,000,000 are included in insurance portfolios. (1)

The story regarding the tremendous expansion of holdings of United States Government Bonds under the impact of World War II is a familiar one to almost everybody by this time. However, the fact that these holdings have continued to grow during 1946, more than a year after the war's end, may not be so well known. The rate of increase in 1946 was lower to be sure than during the war years but it was none the less real. For all the United States life companies the gain was \$917,000,000 compared with a little over \$4,000,000,000 in 1945. At the end of 1945 the percentage of total assets invested in Federal Government securities was 46.0% for all domestic life companies, 46.8% for the forty-nine companies previously referred to, (1) and 50.8% for twenty-two whose

(1) Satterfield, op. cit.

holdings are shown in Figure 14. The percentages for the twenty-two companies are based on ledger assets whereas the other figures are a percentage of admitted assets, but, inasmuch as the difference between the two asset items is not great, the percentages may be considered comparable. The above 1945 percentages are slightly higher than the corresponding ones for the following year which were 44.8% for all companies and 46% for the forty-nine. Data on the other group are not available.

(Hereafter, for the sake of easy reference and to avoid needless repetition, the terms "all", "forty-nine" or "twenty-two" companies will be used to designate the three different groupings used as a basis for the figures in this section of the report. Statistics on the companies in the first two classifications are taken from Mr. Dave Satterfield's report entitled Life Insurance Achievement in 1946 (1) while those for the third have been compiled from a study of annual statements of the companies concerned. Reference will be made also to a group of forty-two major life insurance companies and to a study of the six larger companies. Figures on the former have been furnished by reports in the Wall Street Journal, while those for the latter have been drawn from the annual statements of the Metropolitan, Prudential, Equitable, New York, Northwestern

(1) Satterfield, op. cit.

Mutual and John Hancock life insurance companies.)

A study of acquisitions of United States Government bonds will furnish another slant on the change in the percentage of such securities held in insurance company portfolios. In 1930, for example, Government bond acquisitions for the six larger companies represented 5.2% of their purchases in 1930, 40.6% in 1940 and 69.4% in 1945 (See Table XIII). Inasmuch as data for this group are not available for 1946, figures for the forty-two companies are presented in Figure 15 which reveal the trend in the year after the war's end. Purchases for these major companies which had totaled \$6,300,000,000 in 1945 shrank to almost one-third of that amount (\$2,300,000,000) in the following year. Putting it another way, Federal bond acquisitions amounted to about two-thirds of the total investments made in 1945 and only a little over one-third in 1946.

However, the most surprising thing is not that purchases of government bonds have dropped but that the decline has not been even greater in view of the dearth of new issues. Probably two factors have entered into this situation. One is the combination of the increasing amount of funds to be invested, previously mentioned, and the relatively small volume of new corporate securities being offered. In order to keep funds from lying idle, companies

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However, the most surprising thing is not that purchases of Government bonds have dropped but that the decline has not been even greater in view of the dearth of new issues. Probably two factors have entered into this situation. One is the combination of the increasing amount of funds to be invested, previously mentioned, and the relatively small volume of new corporate securities being offered. In order to keep funds from lying idle, companies

have purchased large quantities of outstanding long-term government bonds in the open market. In the second place, some institutions, as a hedge against a possible increase in interest rates in the near future, have added large quantities of short-term governments to their portfolios. According to unofficial reports this has been the policy of some of the leading American life companies, notably the Equitable, Prudential and New York Life.

Despite the beginning in 1946 of a downward trend in holdings of United States Government bonds, life companies undoubtedly will continue to hold a large proportion of these securities. (1) Although the rate of return is low, the fact these bonds help to satisfy the statutory provisions of those states which require that a certain percentage of the Policy Reserve shall be invested in the so-called "legal" investments, offsets to some extent the low interest factor. If the United States Government continues its "selective redemption" policy, begun in 1946, which is designed to reduce federal debt which may be used as a basis for commercial credit expansion, the proportion of the federal debt held by insurance companies may increase, even though total dollar holdings may continue to decline.

3. Public Utility Bonds and Stocks

During the war years, the securities of the public utility companies lost ground in relation to the total hold-

(1) Satterfield, op. cit. P. 6.

ings of insurance companies even though their dollar volume remained almost constant. However, from the point of view of both the volume and percentage of total assets, investments in stocks and bonds of these corporations have registered gains over 1930. In the earlier year, the forty-nine companies held approximately \$1,675,000,000 (9.7% of assets) of public utility securities. The percentage peak of 15.9% was reached at the end of 1941 when portfolios included \$4,774,000,000 public utility investments, but the dollar volume climbed to \$5,099,000,000 in 1944, declined to \$4,948,000,000 in 1945 and then made a sharp recovery to a peak of \$5,485,000,000 , at the end of 1946. The percentage figures for the twenty-two companies (Figure 15) correspond closely with those for the forty-nine.

These fluctuations in holdings are, of course, a reflection of the acquisitions made over the span of years. Whereas the six leading companies were investing over 30% of their funds in public utilities (bonds and stocks) in 1930, these same institutions reduced the percentage of such purchases to 19.4% in 1940 and 9.2% in 1945. (Table A) Carrying the comparison over into 1946 by using the acquisitions of forty-two companies, we find that, although the dollar volume decreased about \$100,000,000, the percentage of public utility security acquisitions to total investments rose from 9.8% in 1945 to 12.9% in 1946. (Figure 15)

ings of insurance companies even though their dollar volume remained almost constant. However, from the point of view of both the volume and percentage of total assets, investments in stocks and bonds of these corporations have registered gains over 1930. In the earlier year, the forty-nine companies held approximately \$1,875,000,000 (9.7% of assets) of public utility securities. The percentage peak of 13.9% was reached at the end of 1941 when portfolios included \$4,774,000,000 public utility investments, but the dollar volume climbed to \$5,039,000,000 in 1944, declined to \$4,248,000,000 in 1945 and then made a sharp recovery to a peak of \$5,488,000,000 at the end of 1946. The percentage figures for the twenty-two companies (Figure 13) correspond closely with those for the forty-nine. These fluctuations in holdings are, of course, a reflection of the acquisitions made over the span of years. Whereas the six leading companies were investing over 30% of their funds in public utilities (bonds and stocks) in 1930, these same institutions reduced the percentage of such purchases to 19.4% in 1940 and 9.2% in 1945. (Table A)

Carrying the comparison over into 1946 by using the acquisitions of forty-two companies, we find that, although the dollar volume decreased about \$100,000,000, the percentage of public utility security acquisitions to total investments rose from 9.8% in 1945 to 13.9% in 1946. (Figure 13)

Under normal conditions, insurance companies are interested only in top-quality issues and that standard applies to public utilities as well as other corporations. A study of the holdings of the three larger life companies in the United States (Metropolitan, Prudential and Equitable) seems to indicate that quality requirements are being lowered, due largely in all probability to the unusually high price of the triple-A bonds in the last two or three years. (Table XIV) This analysis shows that public acquisitions of top-quality ("AAA") public utility bonds by these three institutions were 66.5% of the total in 1940 and only 34.8% in 1945. The percentage of "AA" purchases did not change materially (24.3% in 1940 and 28.8% in 1945) but 33.9% of the public issues bought in 1945 were of "A" grade compared with 7.2% five years earlier. Moreover, due largely to the purchases of the Equitable, acquisitions of "BBB" and "BB" bonds showed an increase from 1.3% to 3.2%. This policy of buying second-rate public utility bonds is nothing new to the Equitable. In fact, back in 1935, that company purchased, after careful study and consideration of all aspects of the situation, \$125,000,000 of bonds of underlying generating and distributing utility companies, many of which were in the Insull, Associated and similar systems. Although the Equitable had to absorb much criticism at the time for buying what were considered second-quality utility

ANALYSIS OF BOND ACQUISITIONS BY GRADE

Three Larger Life Insurance Companies - 1940 and 1945

TABLE XIV

Quality Rating	RAILROAD BONDS					TOTAL THREE COMPANIES				
	Metropolitan		Prudential		Equitable	1940		1945		
	1940	1945	1940	1945	1940	1945	Amount	% of Total		
AAA	5,476	-	6,965	5,000	22,511	-	34,952	20.7	5,000	1.7
AA	8,700	-	7,840	-	8,590	6,608	25,130	14.9	6,608	2.2
A	7,850	60,548	5,795	48,500	49,138	97,708	62,783	37.2	206,756	69.1
BBB	11,230	30,074	15,931	5,570	11,221	11,522	38,382	22.7	47,166	15.7
BB	-	4,107	500	-	2,287	13,137	2,787	1.7	17,244	5.8
B	939	5,993	450	1,539	669	4,208	2,058	1.2	11,740	3.9
CCC	-	4,004	500	862	1,595	-	2,095	1.2	4,866	1.6
CC	200	-	300	-	250	-	750	0.4	-	-
C	-	-	-	-	-	-	-	-	-	-
TOTAL	34,395	104,726	38,281	61,471	96,261	133,183	168,937	100.0	299,380	100.0

PUBLIC UTILITY BONDS					TOTAL THREE COMPANIES				
Metropolitan		Prudential		Equitable	1940		1945		
1940	1945	1940	1945	1940	1945	Amount	% of Total		
AAA	42,223	26,670	59,500	40,000	768	102,491	66.5	66,670	34.8
AA	17,264	20,700	4,636	34,455	15,567	37,467	24.3	55,155	28.8
A	1,153	34,454	2,042	19,500	7,932	11,127	7.2	64,954	33.9
BBB	-	-	-	-	1,959	1,959	1.3	-	-
BB	1,000	-	-	-	-	1,000	0.7	4,929	2.5
B	-	-	-	-	-	-	-	-	-
CCC	-	-	-	-	-	-	-	-	-
CC	-	-	-	-	-	-	-	-	-
C	-	-	-	-	-	-	-	-	-
TOTAL	61,640	81,824	66,178	93,955	26,226	154,044	100.0	191,708	100.0

ANALYSIS OF BOND ACQUISITIONS BY GRADE (Continued)

Three Larger Life Insurance Companies - 1940 and 1945

TABLE XIV (continued)

Quality Rating	INDUSTRIAL AND MISCELLANEOUS BONDS						TOTAL THREE COMPANIES		
	Metropolitan		Prudential		Equitable		1940	1945	% of Total
	1940	1945	1940	1945	1940	1945			
AAA	11,000	-	6,933	-	552	-	18,485	-	19.3
AA	17,629	5,000	10,721	15,400	7,753	-	36,103	20,400	37.8
A	7,855	2,936	881	9,000	20,832	1,060	29,568	12,996	30.9
BBB	2,000	-	755	-	8,769	10,000	11,524	10,000	12.0
BB	-	-	-	-	-	-	-	-	-
B	-	-	-	-	-	1,000	-	1,000	2.2
CCC	-	-	-	-	-	-	-	-	-
CC	-	-	-	-	-	-	-	-	-
C	-	-	-	-	-	-	-	-	-
TOTAL	38,484	7,936	19,290	24,400	37,906	12,060	95,680	44,396	100.0
									100.0

Source: The Fitch Bond Record and Annual Statements of Companies Shown.

securities, the company and its policyholders enjoyed a fine return on those investments while they were being held and a good profit when they were taken away from them as a result of refunding operations some years later. (1)

Obviously, extreme care has to be exercised in the selection of bonds with other than the highest quality rating, in order not to violate the cardinal precept of insurance company investment policy-security of principal. The ratio of debt to net property and coverage of interest charges should meet the standards or tests outlined previously, management must be capable and there must be sound economic justification for the system. By investing in second-quality utility bonds where such factors as those are favorable, insurance companies have enjoyed a better return on their investment than they would have if they had purchased only "AAA" bonds, some of which, like the Madison Gas and Electric issue mentioned earlier, have sold on yield basis of less than 2.50%.

4. Railroad Bonds and Stocks

Prior to the period of defaults in the early thirties, railroad securities occupied a prominent position in the portfolios of most insurance companies, although they

(1) Thomas I. Parkinson, "Low Interest Rates and Public Welfare" Commercial and Financial Chronicle, November 15, 1945.

have been declining in relative importance since 1906, the earliest year shown in Mr. Satterfield's report. (1) In that year, the forty-nine insurance companies, owned slightly more than \$1,000,000,000 of railroad securities, a figure which represented 35% of their assets. By reference to Table A and Figures 12 and 13 we can see that, at the beginning of the period which we have under review, these same companies held \$2,848,000,000 bonds and stocks of railroads, but this larger total only amounted to 17.8% of their assets. At the end of 1935, the volume was about the same (2,876,000,000) but their relative importance had slipped to 13.4%. The increase of over \$100,000,000 in the holdings of railroad securities during the next five years was not in proportion to the increase in total assets so that, by December 31, 1940, they constituted only 10.6% of the investment portfolio. This downward trend continued in both dollars and percentage during the next six years with the result that only 6.4% of the assets (or \$2,790,000,000) were invested in railroad issues at the end of 1946. The percentage figures for all U. S. life companies were 9.0%, 6.9% and 6.3% for 1941, 1945 and 1946 respectively; those for the twenty-two companies, 14.5%, 11.2% and 7.5% in the years 1935, 1940, and 1945 respectively.

As the figures on holdings indicate, acquisitions

(1) Satterfield, op. cit. P. 10-also Table A (Appendix)

of railroad securities have declined, although a few companies, such as the Equitable, at times have gone against this trend and purchased substantial quantities at favorable prices. In 1938 and 1939, when there was panicky selling of railroad bonds, other institutions dumped a great volume of them into the lap of the Equitable which snapped them up at ridiculous prices. That company, for example, bought Atchison General 4's at 96 and "great gobs" of Central Pacific's in the Southern Pacific System at 75. (1) Of course those purchases were made only after the company had satisfied itself, through legal as well as statistical research, that the courts would uphold the priority of the underlying bonds as against second, third or later liens, and that there would be a revival of heavy industry, which would bring with it an upswing in railroad earnings.

However, the Equitable to the contrary notwithstanding, acquisitions for the insurance business as a whole have dropped sharply. Figures for the six larger companies (Table XIII) indicate that only 8.3% of bonds and stocks purchased in 1945 were those of railroads. In 1930, the percentage was 25.3% and, in 1940, 11.9%. Thus it appears that the decline was sharpest during the thirties and was at a slower rate from 1940 to 1945. Purchases of railroad issues again dropped off severely in 1946 as shown by Figure 15

(1) Parkinson, op. cit. P. 2364.

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(1) Parliament, op. cit. p. 2364.

covering acquisitions of forty-two companies. The acquisitions, in dollars, by this group which were \$700,000,000 in 1945 amounted to less than half of this figure, (\$300,000,000) in the following year. Percentagewise the figure were 7.2% and 4.4% for the two years. This decrease undoubtedly may be attributed in whole or in part to the unskillful, and seemingly unfair, handling of the freight rate case by the Interstate Commerce Commission which has caused investors to look with a skeptical and pessimistic eye on the future of the railroad industry and the soundness of its securities. That this attitude may only be temporary and that a year or so of profitable peace-time operations unmarred by strikes, wage and rate disputes may restore confidence in railroad bonds is suggested by the following quotation:

A railroad is a manufacturing enterprise and like any other.....where there is aggressive, alert and competent management, a sound financial structure; a modern economical plant and a good territory served.....you have the opportunity for a sound investment. (1)

As in the case of public utility issues, the study of the purchases of public issues of railroad bonds by the Metropolitan, Prudential, and Equitable seem to indicate that the insurance companies are satisfying their requirements

(1) Eastern Underwriter, June 7, 1946. P. 16.

(1) Eastern Underwriter, November 1, 1946.

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with other than "AAA" securities in order to make their rate of return on their investments slightly more favorable. During 1940, over 35% of the railroad bonds purchased publicly by these three companies were of "AAA" or "AA" quality, 37.2% were "A" bonds and the balance, 27.2%, were "BBB" or lower. In 1945, only 3.9% of the railroad purchases were "AAA" or "AA" bonds, 69.1% held "A" ratings, and 27% were "BBB" or below. (Table XIV) Considering the extremely low yields on the top-grade railroad securities in the last two years (2.45% on Union Pacifics, for example), it is easy to understand why the insurance companies have had to limit their total purchases of railroad issues and select a larger percentage of the "A" bonds.

5. Industrial and Miscellaneous Bonds and Stocks

The classification of bonds which has been attracting increasing attention from the insurance companies are the industrials. One of the most aggressive companies in this field has been the Penn Mutual. Prior to 1943, that company's holdings of industrial securities varied from $1\frac{1}{2}\%$ to a little more than 3% of its assets. Then in the Fall of 1943 it began to expand appreciably in this field, adding \$9,000,000 of industrial securities to its portfolio in 1943, \$22,000,000 in 1944, \$15,000,000 in 1945, and \$31,000,000 in the first nine months of 1946. (1) As a result of these additions to its portfolio. Penn Mutual's industrial holdings

(1) Eastern Underwriter, November 1, 1946.

amounted to 10% of its assets on September 30, 1946. Other companies, such as Northwestern Mutual, have found similar opportunities for placing increasing sums in industrial bonds and debentures. (1)

What has been the industrial securities picture for the insurance business as a whole? Looking again at Table A, and Figures 12 and 13, we find that investments in "Other Bonds and Stocks", most of which are presumed to be industrial, have shown a steady and persistent, although not spectacular, growth since 1933. For the four preceding years this category of securities amounted to around 3.0% of total investments, and between \$543,000,000 to \$581,000,000. By the end of 1935, holdings had jumped over \$200,000,000 to a total of \$789,000,000 which represented 3.7% of assets. During the next five years investments in this field more than doubled and stood at \$1,772,000,000 or 6.3% of assets, on December 31, 1940. During the war years requirements of industry for additional private capital were relatively small, due to war-time restrictions on plant expansion and federal grants to companies engaged in war projects for the government, with the result that only a little less than \$500,000,000 in industrial securities were added to insurance portfolios during that time. On December 31, 1945, the percentage of such investments to total assets had declined

(1) Weekly Underwriter, July 27, 1940.

to 5.6%. However, as business began to get back into normal production channels, with additional capital needed to accomplish the reconversion process, the surge of insurance funds into industry in 1946, through the purchase of bonds, debentures and stock, swelled the total of industrial investment of the forty-nine companies to \$3,700,000,000 by the end of that year, 8.6% of assets and an increase almost \$1,500,000,000 over 1945. For all domestic insurance companies, the 1946 total is estimated at \$4,150,000,000 a ratio of 8.7% of assets, and an increase of \$1,618,000,000 over the preceding year. Figure 14, covering twenty-two leading companies, reveals corresponding changes in the industrial ratios for this group.

Probably the best indication of the swing to industrial investments is given in Figure 15. Although the total investments of the forty-two life companies there shown dropped from \$9,600,000,000 in 1945 to \$6,600,000,000 in 1946, due largely to the decline in purchases of government bonds previously discussed, acquisitions of industrial and miscellaneous securities more than doubled in dollar volume and increased from 8.4% to 26.3% of total purchases in 1945 and 1946 respectively.

As far as the quality of industrial purchases is concerned, the record of the three companies studied (Metropolitan, Prudential and Equitable) seems to indicate

a similar tendency in industrial acquisitions to that which has been noted previously for public utilities and railroads, namely, an increase in the proportion of bonds with other than "AAA" rating. (Table XIV) It must be pointed out, however, that the figures used for the industrial comparisons are somewhat limited because a fairly large percentage of industrial securities were purchased privately and therefore have not been rated. Using the limited data, we find that the most outstanding differences between 1940 and 1945 are that, although 19.3% of the industrial bonds purchased publicly by the three companies in the earlier year were of top quality, none of the acquisitions in 1945 were of the highest grade; and that the percentage of "BBB" bonds added to investment portfolios was 22.5% in 1945 compared with 12.0% in 1944.

Although the industrial field is wide open, purchases of such securities entail very careful study and raise problems not met in the public utility companies. For one thing, earnings of most industrial concerns are subject to wide fluctuations, following closely the peaks and depressions of the business cycle, whereas stable earnings are necessary to insure adequate coverage of interest charges. Secondly, it is difficult to be a prophet and foresee what the demand will be for a given product twenty or twenty-five years hence. Finally, unless the laws of some of the states are

changed to permit the classification of at least part of the industrial security holdings of insurance companies as "legal" investments, there is an artificial and arbitrary ceiling on the volume of such bonds and stocks which may be acquired. Nevertheless, in spite of these difficulties, there appears to be a decided tendency on the part of many companies to go out aggressively to get more industrial investments.

6. Stocks in General

Although investments in stocks, both preferred and common, have been included in the totals for the railroad, public utility and industrial securities, some separate discussion is required at this point because of the increasing interest which some insurance companies have been showing in equities in recent years. In the first six months of 1946, life insurance holdings of stocks increased 38% over 1945, and reached a total of \$997,000,000, 81% over the 1941 figure. (1) However, this rate of increase apparently was not maintained in the last half of the year probably due in large part to the decline in the stock market in September which chilled the enthusiasm of institutional investors for equity securities. At the end of 1946, investments by life companies were about 27% above the final figures for 1945, judging from data for the forty-nine

(1) Eastern Underwriter, August 30, 1946. P. 12.

companies included in Table A which show a 1946 year-end total of \$925,000,000 compared with a little over \$733,000,000 the preceding year. In the light of stock holdings at the beginning of 1930, the growth in this class of investment seems even more spectacular. Referring again to Table A, we find that the forty-nine life companies held only \$321,000,000 of equities in that year. In other words there has been almost a three-fold increase in seventeen years! During the thirties the stock investments of this same group of companies hung close to the \$500,000,000 mark and did not advance materially until 1944 when acquisitions of almost \$50,000,000 raised the total to over \$592,000,000 at December 31 of that year.

In the case of stocks, the traditional insurance principle of conservatism has been observed and companies lean toward the "blue chip" preferreds. At the end of 1946, 77.3% of the stock investments of the forty-nine companies were in preferred and guaranteed stocks. Between 1930 and 1946 preferred stock investments increased approximately 208% whereas common holdings gained only 140%. It appears, however, that an increasing percentage of the stock purchases in 1946 were of common inasmuch as the common holdings gained 40% in that year over 1945, while the increase in preferred and guaranteed stocks was only 23%. Putting it another way, 85% of the net increase in stock holdings between 1930 and 1946 consisted of preferred

and guaranteed stocks but of the 1946 purchases only 69% were of that type.

There are many indications that the insurance companies are not being led into wholesale purchases of stocks even with the lure of somewhat attractive-for the time being at least-yields. In 1945, the Connecticut law was changed to permit life companies of that state to invest as much as 5% of admitted assets in any type of investment. Although this opened the door for purchase of certain types of stocks, Aetna Life has increased its stock holdings by only \$4,000,000 and an Aetna executive stated that the new legislation had not affected their investment policy to any great extent and that most of their investment money was still going into bonds. (1) An analyst writing in the September 16, 1946 issue of Barron's Weekly about the large volume of electric utility stocks which had glutted the market about that time had this to say:

It had been expected generally that low interest rates would force some investors who normally confine their holdings to bonds and preferred stocks, to buying operating company common stocks, but demand from this source has been disappointing. Although the early issues were overpriced and unattractive in relation to outstanding and seasoned stocks, each subsequent offering has

(1) Investor's Reader, October 4, 1946. P. 2.

and guaranteed stocks but of the 1948 purchases only 80% were of that type.

There are many indications that the insurance companies are not being led into wholesale purchases of stocks even with the lure of somewhat attractive-for-low time being at least-yields. In 1945, the Connecticut law was changed to permit life companies of that state to invest as much as 5% of admitted assets in any type of investment. Although this opened the door for purchase of certain types of stocks, Aetna life has increased its stock holdings by only \$4,000,000 and an Aetna executive stated that the new legislation had not affected their investment policy to any great extent and that most of their investment money was still going into bonds. (1) An analyst writing in the September 18, 1945 issue of Nation's Weekly about the large volume of electric utility stocks which had glutted the market about that time had this to say:

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(1) Investor's Reader, October 4, 1945, p. 2.

been made on a more liberal yield basis. Yet demand still is small. Apparently the large amounts of investment funds which have pushed interest rates to record low levels are not fluid enough to flow freely from senior to junior securities as had been expected. (1)

Mr. B. Hollon Smith in an address before the American Life Convention in October 1946, pointed out that the main obstacles to consideration of common stocks as investments are: (1) the preconceived beliefs that bonds and mortgages are inherently the only safe purchases, (2) no suitable buy and sell formula can be devised to eliminate the human or speculative element in the management of the common stock portfolio; (3) there is no solution to the problem of year-end valuation. (2)

In regard to the relative safety of bonds and mortgages compared with common stocks, Mr. Smith called attention to studies made by the National Bureau of Economic Research which revealed that of the 3000 bond issues brought out between 1900-1939 which had par amounts of \$5,000,000 or over, 19.59% were in default of principal or interest and that five years before default 5.54% of the defaulted bonds were rated AAA; 6.98%-AA; 14.24%-A; and 14.40%-Baa. (3)

- (1) Barrons National Business and Financial Weekly, September 16, 1946.
- (2) B. Hollon Smith, "Common Stocks for Life Insurance Companies", address given October 9, 1946 before American Life Convention in Chicago. P. 5.
- (3) Ibid, P. 6.

These figures illustrate that constant vigilance and revision of the portfolio as economic conditions change is as essential for bonds as it is known to be for stocks and that without such attention, bond investments may not, in the long run, be any safer than stock holdings.

With regard to points two and three, Mr. Smith believes that "Control Plans" and "operating programs can be devised which will remove the element of luck from common stock investments and bring success to the investor who is a long-term holder and is content with reasonable profits", and that the problem of valuation could be handled if insurance commissioners would agree that "securities which represent perfectly sound companies are to be carried at their cost price so long as companies remain sound". (1) Since the validity of Mr. Smith's program is predicated on the assumption that insurance companies would not purchase securities at the peaks of the business cycle, (2) there appears to be strong ground for those who wish to question the soundness of his position.

Moreover, regardless of how insurance companies feel about the wisdom or advisability of holding equities, state laws, which differ greatly on this matter of stock investments by life insurance companies, exercise a very

(1) B. Hollon Smith, op. cit. PP. 18 and 25.

(2) Ibid. P. 26.

great deal of control over or at least influence strongly the attitude and policy of most companies as they survey or enter this field. New York's law, for example, prohibits investment by domestic companies in any stocks, except preferred and guaranteed issues. An "in substance" provision of the New York statutes has had the effect of "tying practically the rest of life insurance America to the New York State kite". (1) That is to say, the "foreign" companies (those domiciled elsewhere but writing policies in New York) have been required to comply with the requirements of that State. The following states permit insurance companies domiciled there to invest in common stocks within various limitations of assets, capital and/or surplus: Connecticut, Illinois, Maryland, Massachusetts, Nebraska, New Jersey, Pennsylvania, Texas and Washington. Iowa, Michigan and Ohio do not permit such investments. (2)

Since the report of the Armstrong investigation in 1906 which has been mentioned earlier is undoubtedly the basis for these legal restrictions, and serves as a guide book for the investment officers of all American life insurance companies, a portion of the report dealing with stocks is quoted below. (The underlining has been added by the writer of this report.)

- (1) Shelby Cullom Davis, "Investment in Common Stocks by Life Insurance Companies", The Analysts Journal, July 1945. P. 5.
- (2) Ibid. PP. 5 and 6.

Investments in stocks should be prohibited. They are fundamentally objectionable, as the corporation, instead of holding a secured obligation, acquires a proprietary interest in another business, with rights subject to all indebtedness which may be created in the conduct of it and often direct liabilities as stockholders. This interest must be nourished and supported. Instead of being a creditor with adequate security, to which upon default the corporation may resort, it assumed the responsibilities of proprietorship and must contribute from the accumulations provided by the policyholders in order to sustain the enterprise. If the stock holdings constitute a small minority the investment is at the mercy of administrators chosen by the majority stockholders. If the stock interest be a large one, it is frequently found advisable to increase it until a substantial control is effected, and the insurance company is not only engaged in a different enterprise, but directly undertakes its management. (1)

Moreover, back in 1941 when hearings were being held on possible changes in the New York insurance laws, some of the top executives of the leading companies displayed a decided lack of enthusiasm for common stocks. Mr. Frederick Ecker, Chairman of the Board of Metropolitan, for example testified that he thought "it would be a sin to utilize the policyholders' funds of a life insurance company to speculate in common stocks" and concluded that "if the stock is sound, the obligation of that company is more sound; and our belief is that we are wiser in adhering to the practice of buying the obligations rather than the equities in corporate enterprise". (2)

(1) Shelby Cullom Davis, op. cit. P. 11

(2) Loc. cit.

The possibility of shrinkage in value is of course one of the basic weaknesses and dangers in stock investments. Mr. Lee P. Stack, Financial Vice President of the John Hancock Mutual Life Insurance Company, has quoted the following examples to prove that a large percentage of such investments could jeopardize the successful operations of insurance companies. Assuming that a company which was fortunate enough to have a Surplus of 10%-and very few companies have this much-had invested 20% of its assets in stock, a decline of 50% in market value of its stock investments would wipe out its surplus completely. Admittedly a drop of 50% is somewhat extreme, but, in an unduly inflated market, it cannot be dismissed as entirely impossible. (The Dow-Jones Industrial Stock average was off 89½% in July 1932 and 50-1/5% in March 1938. (1) However, to take a more nearly normal case Mr. Stack cites the situation of a company with a Surplus of 5% and the same proportion of its assets (20%) invested in stocks. Under those circumstances a drop of only 25% in values would eliminate the surplus account!

As far as the rate of return is concerned, the advantages of common stocks may not be as great as if often believed if the experience of one insurance company which has long invested in common stocks can be considered typical.

(1) B. Hollon Smith, "Common Stocks for Life Insurance Companies", address given before American Life Convention, Chicago, Ill. October 9, 1946.

That institution found that for the period 1925-1940 inclusive, taking into account net profit from sales, depreciation existing in the portfolio and other factors, the yield (on common stocks) would have been something less than 3%. (1) However, a study of the ten larger life companies in the United States suggests that those institutions have been enjoying a somewhat better rate of return on their total stock investments (preferred and common) than they have earned on any of their other investments. The rates earned on stock holdings for those companies in 1935, 1940, and 1945 were 4.5%, 4.6% and 4.2%, compared with 4.2%, 4.4% and 4.3% for Mortgage loans and 3.8%, 3.4% and 2.9% on Bond holdings in those same years (Table XV). According to calculations of Moody's Investment Service, the average yield of industrial stocks in December 1945 was 3.6%, 3.8% in early 1937 and 3.6% in the Spring of 1929. (2) In fact, "industrial stocks yielded 3.6% or lower in some part of every year between 1932 and 1940, except 1937." (3) It should be pointed out that the figures quoted from Moody's refer to industrial stocks only and do not include either rails or utilities.

Nevertheless, all of these figures seem to point to the fact that stocks are not the "grave train" invest-

(1) Shelby Cullom Davis, op. cit. P. 12.

(2) Moody's Stock Survey, December 17, 1945, P. 30.

(3) Loc. cit.

Yields (%) on Principal Asset Items
Ten Larger Life Insurance Companies
of United States-1935, 1940 and 1945

TABLE XV

	<u>1935</u>	<u>1940</u>	<u>1945</u>
Real Estate	-	1.5	5.0
Mortgage Loans	4.2	4.4	4.3
Bonds	3.8	3.4	2.9
Preferred Stocks)	4.5	4.6	4.2
Common Stocks)			
Cash	-	-	-
Miscellaneous	-	-	-
Gross Assets	3.6	3.4	3.1

Source: Best's Life Reports

Yields (%) on Principal Asset Items
Ten Largest Life Insurance Companies
of United States-1935, 1940 and 1945

TABLE XV

1945	1940	1935	
5.0	1.8	-	Real Estate
4.3	4.4	4.2	Mortgage Loans
2.9	3.4	3.8	Bonds
4.3	4.6	4.5	Preferred Stocks (Common Stocks)
-	-	-	Cash
-	-	-	Miscellaneous
3.1	3.4	3.6	Gross Assets

Source: Best's Life Reports

ments which some advocates would try to prove. In fact the crux of the whole matter was described succinctly by Prudential's John W. Stedman in testimony previously referred to:

Whether in order to diversify slightly our assets and increase our income 2% on less than 5% of our total assets, we should take the chance of incurring, first, responsibility for other businesses than our own-businesses unregulated by Federal and state commissions-and, second, criticism that we had vaulted outside the province of stewardship and trusteeship into the domain of economic power. (1)

7. Mortgage Loans

Traditionally mortgage loans have had the reputation of being among the most desirable investments for insurance companies. Since most aspects of the mortgage business have been discussed in some detail in the chapter on investment tests and standards, the comments at this point will be confined largely to the volume and relative importance of mortgages in insurance portfolios.

During 1946, mortgages on both farm and other properties showed improved trends after almost twenty years of steadily declining importance. New mortgage financing extended by life companies in the first nine months of that year amounted to \$1,127,000,000 which compares with \$703,000,000 in the first three-quarters of 1945 and

(1) Shelby Cullom Davis, op. cit. P. 13.

\$959,000,000 during the whole of that year. (1) A spokesman for Prudential said that his company had put \$246,000,000 into mortgages in 1946. (2) Other large companies likewise have been showing substantial increases in mortgage investments but "Prudential continues to lead the mortgage field with 16% of total assets invested in more farm and home mortgages than any other company." (3) That company maintains twenty-seven branch offices from which highly-trained technicians cover eleven hundred cities in the United States and Canada, making appraisals and approving mortgages on the spot. (4) As a result of its aggressive action, Prudential now holds over \$1,000,000,000 of mortgage loans out of a total of \$6,700,000,000 held by all domestic life companies. (5)

Studying the Figures in Table A, we find that, at the beginning of 1928, total mortgages on the books of the forty-nine life companies shown therein, amounted to \$5,658,000,000 or 43.1% of total assets. This was the peak year as far as relative importance goes, although dollar volume

- (1) Weekly Underwriter, November 30, 1946.
- (2) National Underwriter, January 24, 1947.
- (3) Investor's Reader, October 4, 1946. P. 3.
- (4) Loc. cit.
- (5) Loc. cit.

continued to climb until the end of 1938 when it went a little over the \$7,000,000,000 mark. In 1928, 15.1% of the assets were represented by farm mortgages and 28.0% by mortgages on other types of property. By 1935, however, mortgages held by this group of companies had fallen sharply to a little less than \$5,000,000,000 and 23.2% of assets. The drop was most severe in the case of farm mortgages which at the end of that year amounted to only 4.6% of assets. In that era, farmers were faced with rapidly falling prices and dwindling earnings, with the result that foreclosures were numerous because many could not meet interest and principal payments. The total amount of mortgages increased somewhat in 1939 and 1940 so that at the end of the latter year there were \$5,339,000,000 of them on the books of the forty-nine companies, \$789,000,000 farm mortgages and \$4,550,000,000 on other property. While farm mortgages continued to slump during the war years, those on city real estate made some slight gains dollar-wise and, at December 31, 1945, stood at \$666,000,000 (1.6% of assets) and \$5,255,000,000 (12.5% of assets) respectively. Incidentally the mortgage experience of the twenty-two larger companies, as depicted graphically in Figure 14, is almost identical with that of the large group of companies.

As mentioned earlier the mortgage picture for in-

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While farm mortgages continued to slump during the war
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of companies.

As mentioned earlier the mortgage picture for in-

insurance companies brightened considerably during 1946 when the first gain since 1941—a small one to be sure—in the amount of farm mortgages held by those institutions was registered, and the total of other mortgages of the forty-nine companies, increased \$220,000,000 (4.4%) over the previous year. A comparison of the 1945 and 1946 figures for all United States companies is given below: (1)

	<u>Farm</u> <u>Mortgages</u>	<u>Other</u> <u>Mortgages</u>	<u>Total</u> <u>Mortgages</u>
(000,000's omitted in dollar amounts)			
<u>1945</u>			
Amount	\$776	\$5860	\$6636
% of Assets	1.7%	13.1%	14.8%
<u>1946</u>			
Amount	\$800	\$6200	\$7000
% of Assets	1.7%	12.9%	14.6%
% Increase 1946 over 1945	3.1%	5.8%	5.5%

The gross rate earned on the mortgage investments of the ten larger life companies which was 4.2% in 1930, 4.4% in 1940 and 4.3% in 1945, seems to indicate that

(1) Dave E. Satterfield, Jr. op. cit. P. 7.

the mortgage business is a profitable one for the insurance companies. (See Table XV). Although the deduction of service fees, originating commissions, principal losses and home office expenses reduces the net return 1.0%-1.5% to about 3%, based on figures of four life companies, given in Table XVI on the following page, the mortgage field still appears attractive to companies struggling to earn a sufficient return on their investments to meet the 3% rate required to maintain policy reserves.

As to the future, if difficulties between management and labor are solved, it is thought that considerably more than \$10,000,000,000 a year will go into buildings throughout the nation, including commercial and industrial developments. If such full production dreams materialize during the next five years, it is estimated that well over \$5,000,000,000 a year should be invested in mortgage loans during that period. (1)

Two additional points regarding mortgages which were brought out by Mr. Murray Shields, vice president of the Bank of the Manhattan Company in his address before the American Life Convention on October 8, 1946 are worthy of mention. First of all, this economist feels that, when the

(1) National Underwriter, January 24, 1947.

TABLE XVI

Interest Returns on Mortgage Investments

(New City Loans Serviced by Correspondents)

	Mutual Life of New York	Business Men's Assurance- Kansas City, Missouri	National Life Montpelier, Vermont	Liberty Nat'l Life Birmingham, Alabama	Average
F. H. A. Loans					
Gross Rate	4.50	4.50	4.50	4.50	4.50
Service Fee	.62	.60	.50	.50	.55
Originating Commissions	.38	.45	.38	.49	.43
Principal Losses	.10	.25	.12	.15	.15
Home Office Expenses	.19	.40	.28	.45	.33
Net Rate	3.21	2.80	3.22	2.91	3.04
Conventional Loans					
Gross Rate	4.06	4.50	4.25	4.35	4.29
Service Fee	.50	.55	.50	.50	.51
Originating Commissions	.11	.11	.10	.24	.14
Principal Losses	.40	.55	.19	.42	.39
Home Office Expenses	.19	.31	.28	.35	.28
Net Rate	2.86	2.98	3.18	2.84	2.97

Source: Transcript of Open Forum Discussion on the Subject of Net Return on Mortgage Loans-American Life Convention-October 31, 1945.

building industry swings into high gear, "life insurance companies and savings banks may well be able to fill all or most of their investment needs from new mortgages," in which case competition between those institutions and the commercial banks for other types of loans and investments will decline materially with the self-evident result that the "buyer of credit will no longer be able to shop around successfully." (1) Secondly, Mr. Shields believes that, although the quoted rates for mortgage loans may not rise much in the next few years, net rates will improve because of the elimination of fee absorption and of premium payments by the buyer of mortgages, as a result of reduced pressure for such payments which should follow the increase in the volume of new mortgages.

8. Policy Loans and Premium Notes

During the year 1946, considerable stir was created in insurance circles by the announcement of the Mutual Life of New York that, effective September 1, 1946, it would reduce the interest rates charged on loans made to policyholders. In place of the conventional 6% flat rate provided for in most policies, a graduated scale of 5% on the first \$750, 4% on the next \$750 and 3% on any excess over \$1500, was introduced. This was the first action taken by any of the

(1) Murray Shields, "Inflation, Interest Rates and Investment Policy", Bank of the Manhattan Company, N. Y. 1946.

larger companies in recent years to combat the steadily declining volume outstanding policy loans which again is clearly evident from Table A and Figures 12 and 13. The apex of this type of asset for the companies shown by those charts occurred in 1932 and 1933 when a total of about \$3,400,000,000 in loans had been extended to policyholders who found themselves in serious financial straits during the depression of the early thirties. This figure represented 17.9% and 17.8% of total assets in 1932 and 1933 respectively. In 1935, the ratio of policy loans to assets was 14.9; in 1940, 9.7%; in 1945, 4.2%, and in 1946, 3.8%. An almost identical decline may be noted in Figure 14 which covers twenty-two companies. For all life companies in the United States as a whole, there was a net decrease of about \$87,000,000 in such assets in 1946, a more moderate rate of decline than during the four preceding years. The total outstanding policy loans of all companies on December 31, 1946 amounted to \$1,875,000,000,, lowest total for this class since 1927, and only 3.9 of total assets. (1)

After Mutual Life announced the reduction of interest rates on loans, several other life companies sent letters to their field forces giving the views of the respective companies on Mutual's policy. These letters pointed out that life insurance should discourage borrowing rather

(1) Dave E. Satterfield, op. cit. P. 7.

than make it easier, cited the expense involved in handling the large number of small loans, and the necessity of maintaining large liquid funds to make loans available on demand, and predicted that the lower rates might cause loss of interest income and thereby add to the cost of life insurance. (1) Mr. Thomas I. Parkinson, President of Equitable Life Assurance Society of New York, in an open letter forum conducted by The Spectator, made the following comments:

We....believe that our loans on policies are not primarily a matter of investment, but rather a matter of service required by law. We still believe that a policy loan is too often the first step toward discontinuance of the policy and we still emphasize the desirability of continued protection. Notwithstanding the investment problem which all life companies face, we prefer not to encourage policy loans, and we do not think of them as providing opportunity for investment income but rather as a service to meet the emergency needs of our policyholders. (2)

Insurance Commissioner W. Ellery Allyn of Connecticut believes life insurance companies shouldn't encourage policyholders "to burden their policies with debt, either by tempting them with a low policy loan rate or otherwise." "Even though such a low rate," he continued, "superficially may appear to benefit the borrower, yet in the long run the company has done the borrowing policyholder no favor." (3)

- (1) Eastern Underwriter-August 16, 1946. P. 1.
- (2) The Spectator, September 1946
- (3) Eastern Underwriter, August 14, 1946, P. 6.

In the face of opposition or at least scowls of disfavor from most of the rest of the insurance industry, Mutual has continued to publicize and push its new sliding scale interest plan. The company is stressing the following advantages which policy loans have over bank loans. (1)

- (1) The rates charged on policy loans are true interest rates rather than discount rates. Example: A 3% discount rate on an installment loan paid off in 12 equal monthly payments is equivalent to 5.81% on a true interest basis.
- (2) No investigation is conducted.
- (3) The transaction is confidential.
- (4) The funds are made available promptly.
- (5) The interest rate cannot be increased without at least 12 months' advance notice.
- (6) The loan cannot be called.
- (7) The loan has no definite maturity date.
- (8) The loan can be repaid on any basis you wish.
- (9) You keep possession of your policy.

The reduction of Mutual Life's policy loan interest rates September 1, apparently has produced the desired results

- (1) United States News, February 7, 1947. P. 4.

of regaining substantial amounts of this business which had been going to banks offering lower interest rates than those prevailing among life companies generally. Mutual's policy loans declined \$300,000 to \$500,000 per month for the first eight months of 1946, continuing an almost uninterrupted shrinkage in its outstanding policy loans which began in 1933. However, since the lower rates were made effective it has been reported that the volume of new loans and the total policy loan portfolio have increased substantially. (1) Whether other life companies will follow Mutual's lead and reduce the rates on their policy loans also, remains to be seen.

9. Real Estate Holdings.

Although total real estate holdings of life insurance companies continued, in 1946, the downward trend which began in 1938, there are many indications that this trend will be reversed soon, possibly in 1947. Some states, like New York, California and Connecticut have modified their laws recently to permit insurance companies to own and hold real estate for investment; others are contemplating similar action; while insurance companies domiciled in states which have long permitted real estate holdings are finding increasing opportunities for the purchase of income producing

(1) National Underwriter, December 27, 1946.

property, such as stores, already constructed, the erection of housing projects for sale or rent and the construction of business property to be leased to others. Before discussing some of these developments in detail, let us see what the data for the forty-nine larger life companies (Table A and Figures 12 and 13) show about the volume and relative importance of real estate in insurance company portfolios.

The beginning of 1930 found the real estate account of these companies at \$339,000,000, or 2.1% of all assets. Small increases were made during the next three or four years but it wasn't until 1933 that the first major upsurge occurred, probably under the influence of depression foreclosures, particularly of farm property. Real estate holdings in that year increased \$356,000,000 or about 47.6% over the previous year. The build-up of this class of investments continued through 1937, at which time the forty-nine insurance portfolios contained \$1,930,000,000 of real estate holdings, representing 8.0% of their assets, much of which undoubtedly was "distress" or foreclosed mortgaged property. When the companies were able to dispose of these holdings, their investment in real estate slid off rather rapidly, in both dollar volume and the ratio of real estate to total admitted assets; and, at the end of 1946, the total of their real estate holdings was a mere \$625,000,000

or 1.5% of assets. For all United States life companies, the percentage was 1.6% on December 31, 1946 as against 1.9% at the end of 1945, and the volume was \$775,000,000, the lowest amount since 1931. (1)

Since the first of 1946, Aetna Life has led off in an untried investment field-department store real estate. (2) Its first step in this direction was the purchase for \$6,500,000 of the land and building of Bamberger's in Newark, N. J. In September 1946, that company added the properties of six California stores to its holdings, an investment of \$10,000,000. (3) Another Connecticut company, the Connecticut Mutual Life purchased for investment in July 1946, at an undisclosed price, a piece of property in the retail district of Chicago, which is under a lease to the F. W. Woolworth Company which expires in 2017. (4)

The Equitable likewise has turned its attention to the real estate field as a result of the amendment of New York's insurance law in 1946 to permit insurance companies to purchase and hold income properties for investment. One of its outstanding acquisitions of this kind was the purchase early in 1947 of the Bonwit Teller store building

- (1) Dave E. Satterfield, op. cit. P. 8.
- (2) Investor's Reader, October 4, 1946. P. 2.
- (3) Investor's Reader, October 4, 1946. P. 2.
- (4) Boston News Bureau, July 23, 1946.

on Fifth Avenue in New York City. It has been reported that the price paid for this property was \$6,250,000, a rate of \$275 per square foot, the highest rate ever known to have been paid for a Fifth Avenue building. (1)

Moreover, New York real estate men are spreading rumors that life companies are planning to put approximately \$30,000,000 into Fifth Avenue real estate. (2)

In its first transaction under the 1946 amendment to the New York law referred to in the previous paragraph, Mutual Life of New York purchased, late in 1946, seven large retail stores of Sears Roebuck and Company. (3) In February 1947, the same institution bought seven additional retail properties of Sears, all located in California. (4) The fourteen stores have been leased to the mail order house for a long term.

Purchases of store property apparently are being encouraged by the retailers, because, with the ownership in the hands of the insurance companies, their real estate investment is freed and made available for expansion and other merchandising purposes. (5) On the other hand, these investments should prove profitable to the insurance companies,

(1) National Underwriter, January 31, 1947. P. 21.

(2) Loc. cit.

(3) National Underwriter, December 27, 1946. P. 13.

(4) Weekly Underwriter, February 15, 1947. P. 491.

(5) National Underwriter, January 31, 1947. P. 2.

if the usual careful scrutiny is made of economic factors, shopping trends and other elements bearing on the long-run success of the enterprise to which the acquired property is to be leased.

Another interesting development in real estate investment by insurance companies is seen in the announcement that contracts had been let by Metropolitan Life late in the Summer of 1946 for the erection of a nineteen-story structure at Fifty-first Street and Fifth Avenue in New York on the site of the old Cornelius Vanderbilt home. The first three floors of the new building will be occupied by City Bank Farmers Trust Company and the other sixteen floors will be leased to the Crowell-Collier Publishing Company. (1) A similar project has been arranged by New York Life which recently completed an agreement with Continental Can Company for the construction of new manufacturing facilities for the latter which it is estimated will cost in the neighborhood of \$10,000,000. (2) The plants will be leased to Continental on a long-term basis.

Probably the most widely-publicized and lucrative type of real estate investment was pioneered in 1922 by Metropolitan in the construction of a mammoth housing development. Since then that company has invested over \$100,000,000

(1) Eastern Underwriter-August 2, 1946. P. 1.

(2) Weekly Underwriter, January 11, 1947. P. 176.

in the same field. (1) When present projects have been completed, total occupancy of Metropolitan housing will be 31,500 families. (2) Although no information has been released by the company regarding the exact rate of return from their housing investments, it admits that it is well above the average. Guesses as to the figure run as high as 10%. (3) General experience indicates that housing offers a virtually sure net return of 6%. (4)

Some of the other big insurance companies like Equitable of New York, Prudential, New York Life and John Hancock have begun to move into the housing field but have been running into material and cost troubles. The Institute of Life Insurance reported in August 1946 that construction by life companies of \$150,000,000 of rental housing, which will provide homes for 75,000, either had been started at that time, or was scheduled to begin within a year. (5) Total housing being financed by these companies on an ownership basis was estimated at \$125,000,000, consisting of homes for 150,000. (6) Twenty housing projects

- (1) Investor's Reader-October 4, 1946.
- (2) Investor's Reader, October 4, 1946.
- (3) Loc. cit.
- (4) National Underwriter, August 2, 1946. P. 4.
- (5) National Underwriter, August 2, 1946. P. 6.
- (6) Loc. cit.

in ten states are under construction or are being operated by life insurance companies, and additional units of which public announcement has not yet been made are being planned or are under consideration by about twenty companies not yet active in this field. (1)

Instead of building houses for rent as is being done by Metropolitan (Parkchester and Stuyvesant Town in New York), John Hancock (Hancock Village in Brookline, Massachusetts), and others, California-Western States Life Insurance company has planned its Lakewood City Housing Project for sale rather than rental. (2) Mr. O. J. Lacy, President of that company who discussed this development before the American Life Convention in October of 1946, stated that there are seven steps in a plan of that kind: (1) selection of suitable land, (2) employment of competent engineers to plot the land, (3) selection of a builder of ability and integrity, (4) selection of a selling agency which will undertake to sell the homes at a minimum commission, (5) establishment of an adequate system of accounts to permit definite control of funds, (6) tying in of the owner with a selling agency to provide that where loans are placed on homes that are sold, such loans are to be carried by the owner, and (7) securing of loans at a discount instead of at

(1) National Underwriter, August 2, 1946, p. 6

(2) National Underwriter, October 11, 1946.

- (1) National Underwriter, August 2, 1946, p. 6
 (2) National Underwriter, October 11, 1946.

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premiums paid for FHA and GI loans. (1) "Scarcity of building materials, uncertainty of building costs, and the interminable and ever-changing governmental edicts" were mentioned by Mr. Lacy as some of the problems which were delaying the actual construction work at Lakewood City (2) and are likewise hampering other insurance companies in carrying out their housing plans.

Investment officials of life companies as well as general officers see in housing for the "white collar" group a "fundamentally sound investment medium for company funds". (3) The advantages which may accrue to life insurance companies which are active in the home construction field have been effectively classified by a housing official of the John Hancock as follows: (1) safety of investment, (2) adequate rate of return, (3) satisfactory public relations, (4) the application of premium income to human needs, (5) the improvement in mortality experience resulting from good housing, and (6) civic betterment. (4) Of these six advantages, the better-than-average rate of return which seems to be one of the best counter measures against low interest levels resulting from the government's cheap money

(1) National Underwriter, October 11, 1946.

(2) National Underwriter, October 11, 1946.

(3) Loc. cit.

(4) Loc. cit.

policy, is probably the principal factor in the tremendous increase in popularity of housing developments among life insurance companies. (1)

(1) National Underwriter, August 2, 1946.

IV. General Investment Policies Past, Present and Future

A. Policies Reflected in Development of General Investment Policies

1. Cultivation of "Private Deals"

Whereas previous chapters have discussed in detail the investment policies, plans and objectives of life insurance companies with reference to the various types of investments, consideration will be given to the cultivation of so-called "private deals" in the purchase of industrial and public utility securities which have come into prominence in the early thirties after the recommendation of the Securities and Exchange Commission.

SECTION IV

GENERAL INVESTMENT POLICIES

PAST, PRESENT AND FUTURE

The term "private deal" refers to an agreement, made directly or through the selling of a security by an individual or through an insurance company, for the purchase of securities of some class or classes of securities (bonds and/or stocks). This procedure is in contrast to the public offering of securities through an investment banking concern or group which underwrites the securities and then resells the bonds or stocks to the public.

Data for 1930, 1940 and 1945 for bond purchases by the six major United States life insurance companies which is reflected in Figures sixteen, seventeen, eighteen, and nineteen, indicate a great deal of speculation was only

IV. General Investment Policies Past, Present and Future

A. Policies Reflected in Composition of Present Portfolios

1. Cultivation of "Private Deals"

Whereas previous chapters have discussed in detail the investment policies, plans and procedures of life insurance companies with reference to specific types of investments, consideration will be given here to several broad policies applicable to and reflected in one or more of the various fields previously mentioned. The first of these is the cultivation of so-called "private deals" in the purchase of industrial and public utility securities which first came into prominence in the early thirties after the establishment of the Securities and Exchange Commission.

The term "private deal" refers to an agreement, made directly or through the medium of a liaison agent, between a borrower and an insurance company for the sale and purchase respectively of some class or classes of securities (bonds and/or stocks). This procedure is in contrast to the public offering of securities through an investment banking concern or group which underwrites the entire issue and then resells the bonds or stock to the public.

Data for 1930, 1940 and 1945 for bond purchases by the six larger United States life insurance companies which is reflected in Figures sixteen, seventeen, eighteen, and nineteen, indicate a great deal of variation not only

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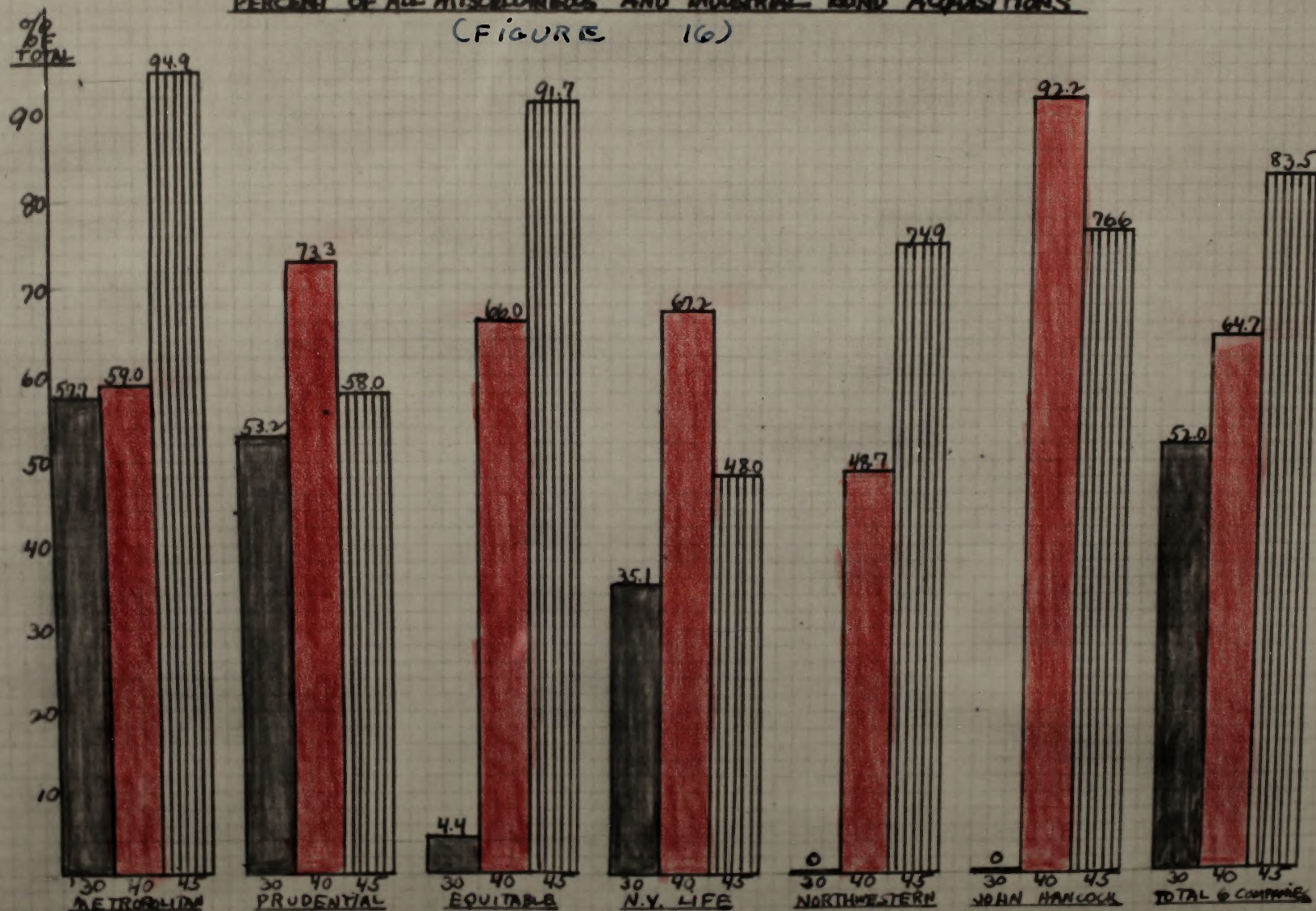
Data for 1930, 1940 and 1945 for bond purchases

by the six larger United States life insurance companies

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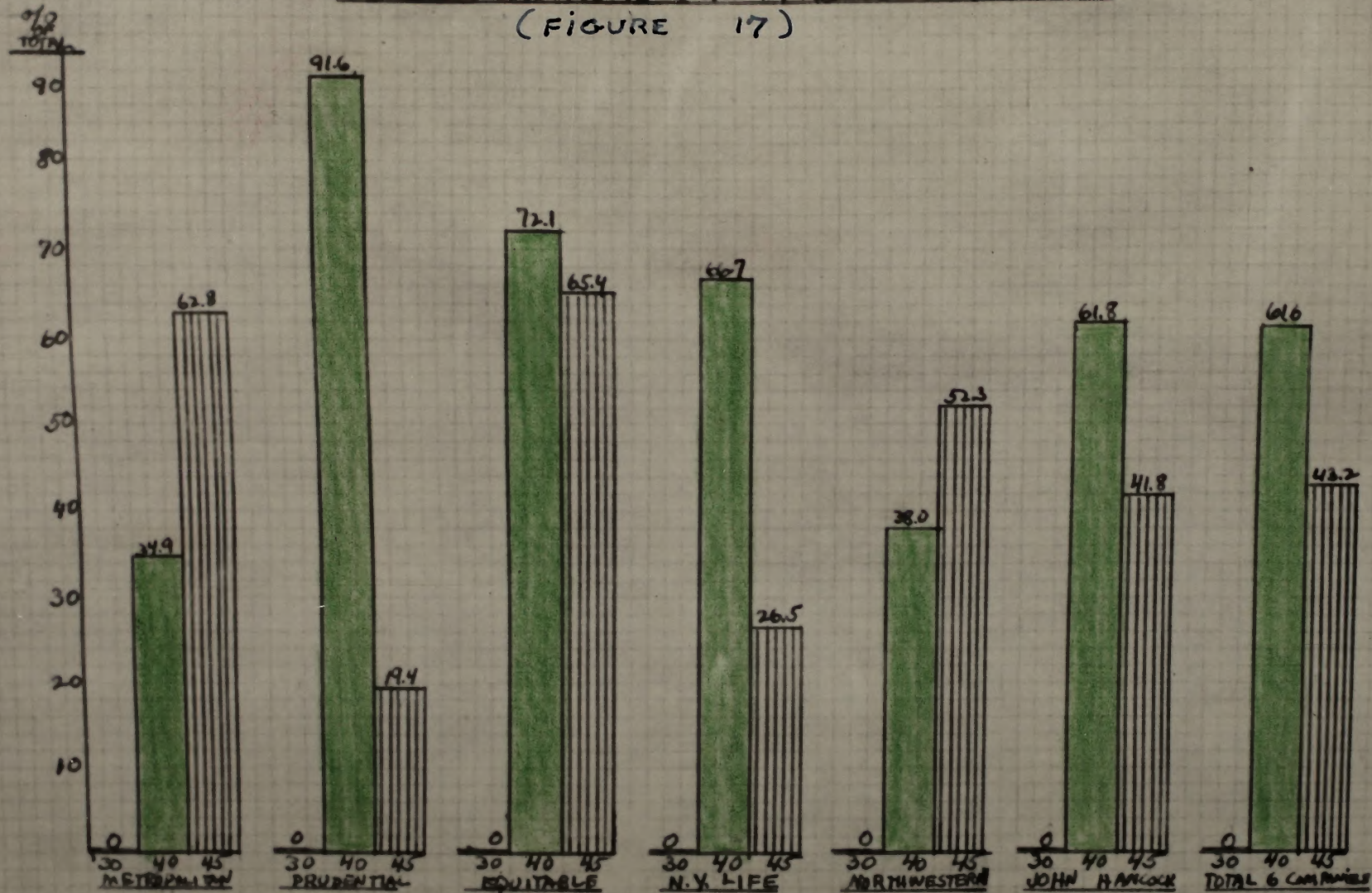
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ANALYSIS OF "PRIVATE DEALS" - MISCELLANEOUS AND INDUSTRIAL BONDS
SIX LIFE INSURANCE COMPANIES - 1930, 1940, 1945
PERCENT OF ALL MISCELLANEOUS AND INDUSTRIAL BOND ACQUISITIONS
 (FIGURE 16)



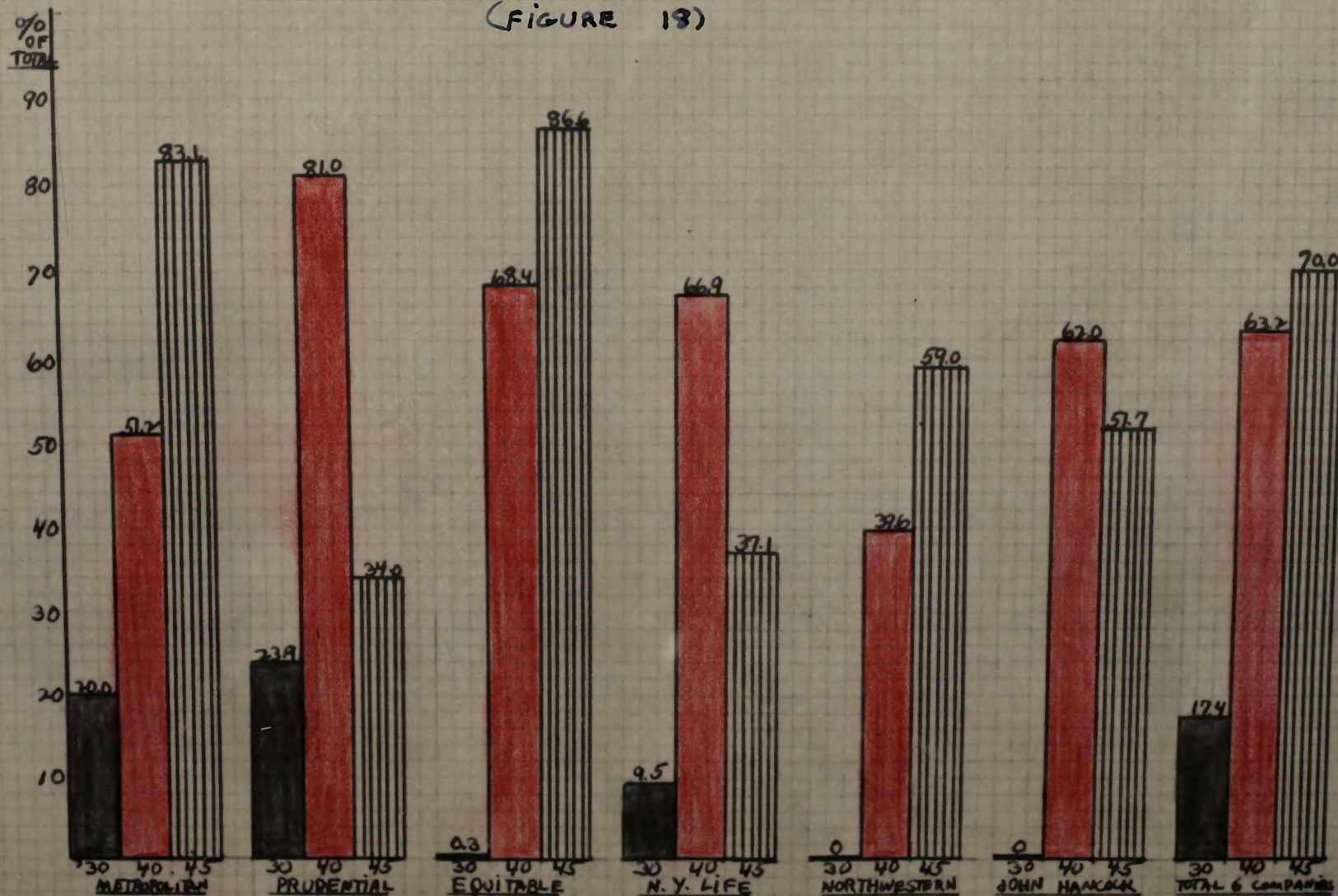
SOURCE: ANNUAL STATEMENTS OF SIX COMPANIES SHOWN

ANALYSIS OF 'PRIVATE DEALS' - PUBLIC UTILITY BONDS
SIX LIFE INSURANCE COMPANIES - 1930, 1940, 1945
PERCENT OF ALL PUBLIC UTILITY BOND ACQUISITIONS
 (FIGURE 17)

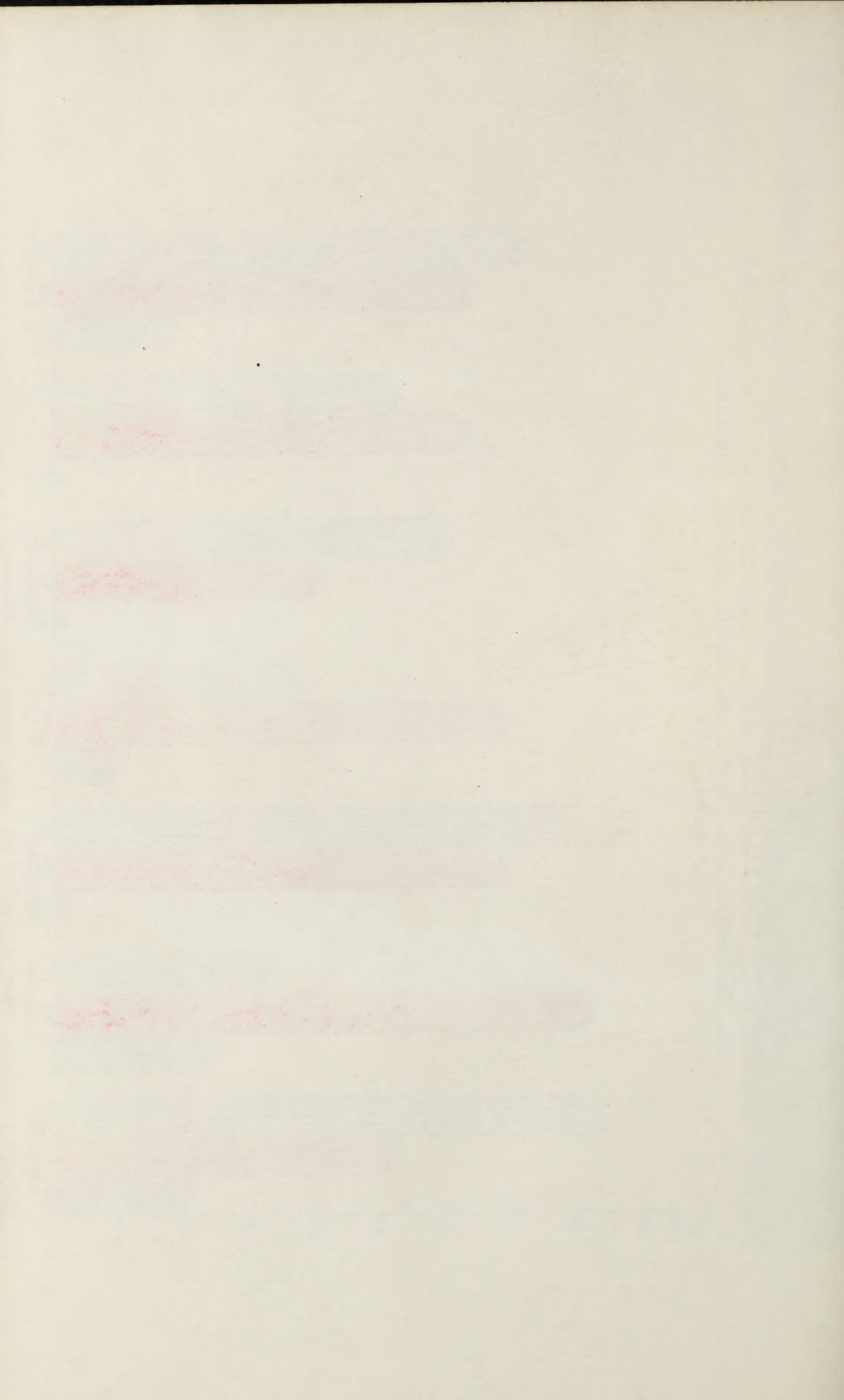


SOURCE: ANNUAL STATEMENTS OF SIX COMPANIES SHOWN

ANALYSIS OF "PRIVATE DEALS" - SIX LIFE INSURANCE COMPANIES
PUBLIC UTILITY, MISCELLANEOUS AND INDUSTRIAL BONDS - 1930, 1940, 1945
AS PERCENT OF TOTAL OF SUCH BONDS ACQUIRED
 (FIGURE 18)



SOURCE: ANNUAL STATEMENTS OF SIX COMPANIES SHOWN

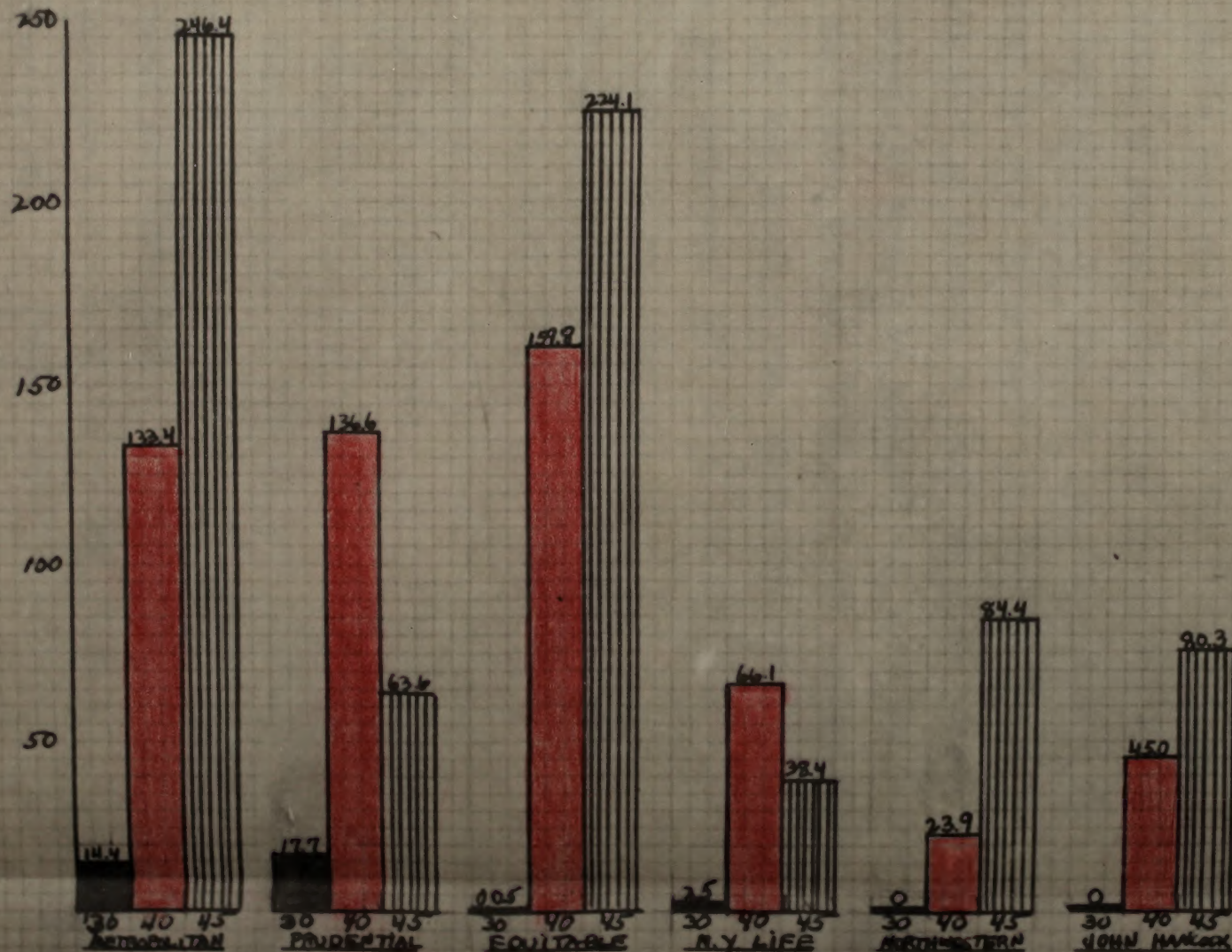


ANALYSIS OF "PRIVATE DEALS" - SIX LIFE COMPANIES PUBLIC UTILITY, INDUSTRIAL AND MISCELLANEOUS BONDS

1930, 1940, 1945

(FIGURE 19)

\$
 000,000's
 OMITTED



SOURCE: ANNUAL STATEMENTS OF SIX COMPANIES SHOWN

between companies but also between the public utility and industrial security sections. For example, in 1930, 57.7 per cent and 53.2 per cent of industrial and miscellaneous bond purchases of Metropolitan and Prudential, respectively, were private deals while only 4.4 per cent of Equitable's industrial bonds were purchased privately in that year. In 1940, the ratio of private industrial purchases to total industrial investments for the six companies varied from 59.0 per cent for the Metropolitan to 92.2 per cent for the John Hancock with an average of 64.7 per cent (Figure sixteen). However, it should be pointed out that the dollar volume of the latter company (\$590,000) was insignificant beside that of the Metropolitan (\$103,760,000). The 1945 average in the Industrial and Miscellaneous classification for the six companies was 83.5 per cent, with the percentages for the individual institutions ranging from 48.0 per cent (New York Life) to 94.9 per cent (Metropolitan).

"Private deals" in the public utility field did not exist in 1930 to speak of so that the first significant data shown in Figure seventeen are for the year 1940. In that year, Prudential led the other five companies with a ratio of private to total purchases of utility bonds of 91.6 per cent; the Metropolitan was low with 34.9 per cent; and the six-company average was 61.6 per cent. In 1945, public purchases in this field exceeded private acquisitions which amounted to only 43.2 per cent of the total for the

six companies as a whole. Prudential, which, as noted above, was high in 1940 with 91.6 per cent dropped to the bottom of the pile in 1945 with only 19.4 per cent of its public utility purchases made privately, while the Metropolitan and the Equitable registered 62.8 per cent and 65.4 per cent respectively. (Figure seventeen).

The combined figures for both the public utility and industrial and miscellaneous groups are shown graphically in Figure eighteen. From this it can be seen that the relative importance of private deals for the six companies combined has been increasing but at a much slower rate from 1940 to 1945 than in the preceding ten years (17.4 per cent in 1940, 63.2 per cent in 1940, and 70.0 per cent for 1945). The records of the individual companies, however, vary considerably. Metropolitan, Equitable and Northwestern have increased the percentage of private deals to total purchases of the two groups of bonds studied. On the other hand, the Prudential and the New York Life, as well as the John Hancock to a lesser extent, appear to have picked up in 1945 far more industrial and utility bonds from public offerings than they acquired in that manner in 1940. The figures for 1940 and 1945 respectively were 81.0 per cent and 34.0 per cent for the Prudential; 66.9 per cent and 37.1 per cent for the New York Life, and 62.0 per cent and 51.7 per cent for the John Hancock.

prosecutive The dollar volume of private purchases (Figure nineteen) for the Prudential and New York Life also was lower in 1945 than in 1940, while that of the other four companies, including John Hancock was up. The Metropolitan and Equitable were neck and neck with \$246.4 million and \$224.1 million dollars respectively. Their closest competitors in the amount of private bond purchases (utilities plus industrials and miscellaneous) only had about one-third as much volume. (Northwestern \$84.4 million and John Hancock \$80.3 million).

From the point of view of the insurance companies these private deals have certain very definite advantages which have encouraged some of them to adopt recently very aggressive steps in order to invest a larger proportion of their available funds in securities bought directly from the issuing companies. One insurance company has located one of its investment officers in a large middle-western city to offer advice and assistance on bond financing problems to industrial concerns in that section. Another institution is reported to have less experienced contact men in many of the larger cities across the country whose primary purpose is to persuade prospective longterm, large-scale borrowers to arrange their financing requirements with that company.

One advantage is that in a private financing operation, an insurance company can "trade out" the terms and provisions of the loan to get more desirable security and

protective provisions in the mortgage indenture than are offered in many public issues. For example, most companies insist on a limitation on the issuance of additional bonds, a maintenance and depreciation covenant which specifies that a certain percentage of operating revenues (the percentage varying with the type of company) be expended or set aside each year for maintenance, repairs and/or improvements, a sinking fund which will retire a substantial portion of the loan by maturity, a restriction on the payment of common dividends except out of earnings accumulated after the loan is made, the maintenance of working capital at a specified level in relation to the fixed or mortgage indebtedness, and other similar provisions, many of which sometimes are not included in the indentures covering public issues.

In the second place, the insurance company usually is able to obtain a higher rate of return on such private investments than can be earned on securities bought publicly, inasmuch as the borrowing companies often are willing to pay a premium in order to avoid the trouble and expense of registering the issue with the Securities and Exchange Commission. In the long run the saving of this registration expense gives the borrower a lower net cost than he would have had on a public offering.

Moreover, in a private deal, the financing institution is in a position to set the redemption prices on the securities sufficiently high to do one of two things -- either

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securities sufficiently high to do one of two things -- either

discourage the borrower from refunding the issue at a lower rate if interest rates should happen to decline a few years after the loan has been floated, or permit the company a reasonable profit in the event that the bonds are redeemed or refunded. Once an issue of bonds has been purchased an insurance company seldom voluntarily disposes of them. They are bought with the intention of being held to maturity, since constant turnover in investments unnecessarily increases the expense of the investment department and reduces the net earnings. Hence, any action which tends to restrict the redemption of holdings, except at a profit large enough to compensate for the extra expense involved in reinvesting the funds, is desirable from the insurance company's point of view.

Finally, in private deals, insurance companies are able to find out at all times exactly what is going on in the borrowing company and are in a position to appraise the company and its prospects. Quarterly financial statements which must be submitted by the borrower are analyzed carefully. If information which is obtained from the statements or other sources reveals any unfavorable factors or potential danger spots, financial officers of the insurance company meet with the management of the concern to which money has been loaned to discuss the situation. Such conferences are held not for the purpose of controlling or interfering with management but with the aim of giving

discourage the borrower from refunding the issue at a lower rate if interest rates should happen to decline a few years after the loan has been floated, on behalf the company a reasonable profit in the event that the bonds are redeemed or refunded. Once an issue of bonds has been purchased an insurance company seldom voluntarily disposes of them. They are bought with the intention of being held to maturity, since constant turnover in investments unnecessarily increases the expense of the investment department and reduces the net earnings. Hence, any action which tends to restrict the redemption of holdings, except at a profit large enough to compensate for the extra expense involved in reinvesting the funds, is desirable from the insurance company's point of view.

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counsel, advice, and assistance which may help to rectify the points of weakness, to the mutual advantage of the borrower and the insurance company.

2. Increase in Canadian Investments

During the last few years some life companies have been expanding their Canadian investments, both governmental and private, to a considerable degree. Although the trend in this direction, as indicated by Table X, has not shown as pronounced an upswing as is sometimes imagined, the volume of Canadian securities held by the forty-nine United States life insurance companies did show a considerably greater percentage increase during the years 1941 - 1945 (55.9 per cent) than the domestic investments (36.0 per cent). However, the Canadian increase, because it was based on much smaller totals did not increase substantially the relative importance of Canadian securities in the investment portfolios of the companies -- 3.3 per cent in 1941 against 3.8 per cent in 1945. Undoubtedly the figures of several individual companies, judging from a hasty review of their annual statements, would show a much greater increase in the proportion of Canadian investments than the above-mentioned averages do.

One of the main attractions of the Canadian issues, of course is the higher yield obtainable, compared with the return on comparable securities of United States companies.

For example, while the average yield on all industrial investments made in 1946 by one of the larger United States insurance companies was 3.28 per cent, the rates of return on individual Canadian investments made by that company ranged from 3.50 per cent on first mortgage bonds, to 3.54 per cent and 3.67 per cent on some twenty year debentures and 4.40 per cent on a two million dollar issue of cumulative preferred stock. In the second place, domestic companies stand to gain additional profits from fluctuation in exchange rates. Although such supplemental gains are unpredictable and therefore strictly speaking, speculative, it appears that the variations in currency exchange rates between the two countries, have added considerable funds to the insurance companies' treasuries. Whether the present exchange rate will continue to be weighted in our favor remains to be seen and only time can tell. Thirdly, the potential earning power of Canadian industries, which are faced with rapidly expanding markets and growing demand for their products, as well as a seemingly more reasonable attitude on the part of labor, seems excellent.

As for the disadvantages which might be mentioned, three stand out as being of particular significance. One is the extra work and expense involved in the transfer of funds for payment of Canadian purchases. Although many of these details are handled by and through the facilities of the banking connections maintained by the insurance companies,

there are many time-consuming administrative and bookkeeping matters which require particular attention and special handling by the bond accounting sections of the insurance companies.

The second potentially unfavorable factor which must be considered when buying Canadian issues is that, up to now the utilities and industrial concerns of Canada have been subject to much less strict supervision and control by governmental agencies. Occasionally this deficiency may work out to the benefit of bondholders -- as for example, in the case of enforced utility rate reductions which are frequently ordered by the public service commissions in the States -- but, in general, it is agreed that the supervision of the Federal and state governments has brought about many desirable improvements in the accounting and general operating procedures of American companies, as well as in the matter of full disclosure of all pertinent information regarding new securities being brought on the market and about the company issuing them.

A final potentially unfavorable element in Canadian investments is the growing tendency in some of the provinces toward the nationalization of industry. In Quebec, for example, a governmental agency, the Quebec Hydro-Electric Commission, which has been given broad powers of supervision and control of electric utilities, has expropriated the assets of one of the larger electric companies in Canada.

(Montreal Light, Heat and Power Company). Similar developments elsewhere all tend to add a tinge of uncertainty to the future of private enterprise in Canada, and suggest the necessity or advisability of caution in adding Canadian securities to the insurance company portfolios.

3. Sale and Redemption of Securities at a Profit

Since life insurance companies buy for investment and not for speculation on the appreciation in value of securities, most of them follow the policy advocated by a former treasurer of one of the larger life companies -- "Never sell anything". Naturally, there must be exceptions to this general rule to insure that any weak or potentially weak bond or stock is eliminated from the portfolio but, in general, the voluntary turnover of insurance investment holdings is negligible. Among the many factors which enter into discussions regarding the advisability of selling insurance company investments are the following: (1) cost; (2) present market price; (3) call price; (4) yield on present holdings; (5) future earning power of company whose securities are now held; (6) availability of other investment outlets for proceeds of sale; and (7) yield on possible replacement securities. Occasionally careful consideration and weighting of these various items may indicate that a switch in securities may be beneficial but as mentioned above such instances are rare in the carefully selected portfolios of insurance

companies.

On the other hand, involuntary dispositions occur whenever the issuing company finds it possible and advantageous to redeem completely or refund at a lower rate of interest, before maturity, its outstanding bonds and/or preferred stock. This situation has prevailed especially during the last two or three years (1943 - 1946) when interest rates dropped to unbelievably low levels, and when cash reserves and surplus of many companies had reached new highs as a result of war-stimulated production and sales. Now most securities provide that if they are called, ie. redeemed and paid, before their fixed maturity date, the holder of those securities will be paid a premium by the issuing company in addition to their face value, as partial compensation for the loss of interest and the work involved in reinvesting the funds. Consequently, all insurance companies which have been among the largest holders of issues called have enjoyed a nice profit on those redeemed investments. A good illustration of profits of this kind was given in an earlier chapter in which the purchase of second-grade utility and certain selected railroad bonds by the Equitable of New York was discussed; (1) practically all insurance companies have shared in such gains.

(1) Cf. ante, pp. 93 and 96

4. Maintenance of Strong Current Position

At various times during the past sixteen years, insurance companies have thought it desirable to maintain a strong current position in anticipation of a rise in interest rates. Accordingly they have increased their holdings of short-term securities and/or allowed their bank deposits to build up to unusually high levels so that they would be in a position to buy securities at rates of interest higher than those prevailing when the funds originally became available for investment, instead of having them tied up in long-term investments with a relatively low yield.

One or two illustrations will explain and clarify the theory behind this program of building up cash reserves when interest rates are exceptionally low. If one hundred dollars is invested for twenty years at $3\frac{1}{2}$ per cent, the total return would be seventy dollars, whereas the same amount invested at $4\frac{1}{2}$ per cent would provide an identical return in fifteen and one-half years. In both cases, the item of compound interest has been ignored, but it is apparent that if interest rates improved during the first four and one-half years after the funds became available for investment, the investor would be as well off if he allowed the money to lie idle as if he invested it at the prevailing low rates. If it is assumed that funds would be invested for more than twenty years at the low interest

return, the period during which the money could be allowed to be idle without jeopardizing investment income would be lengthened. For example one hundred dollars invested at $3\frac{1}{2}$ per cent for thirty years would provide the same return as one hundred dollars invested at $4\frac{1}{2}$ per cent for twenty-three years and four months. (1) Although the rates of interest used in these illustrations are not in accord with those prevailing and anticipated at the present time, they serve to demonstrate the theory which justifies the accumulation of cash reserves and large investments in short-term securities when the nadir of interest rates is presumed to have been reached.

In the middle thirties, when policies of this kind were being advocated, Municipal bonds with but a few years to maturity and short-term United States Government bonds were suggested as the most promising temporary outlets for investment funds. (2) Tax notes which run less than one year, notes of the large automobile finance companies, and one-to-four-year bonds of railroads and public utilities were also considered at that time as possible short-term investments.

- (1) Intra-office Memorandum of John Hancock Mutual Life Insurance Company, dated November 6, 1935.
- (2) Intra-office Memorandum of John Hancock Insurance Company, dated November 6, 1935.

return, the period during which the money could be allowed to be idle without jeopardizing investment income would be lengthened. For example one hundred dollars invested at 3½ per cent for thirty years would provide the same return as one hundred dollars invested at 4½ per cent for twenty-three years and four months. (1) Although the rates of interest used in these illustrations are not in accord with those prevailing and anticipated at the present time, they serve to demonstrate the theory which justifies the accumulation of cash reserves and large investments in short-term securities when the need of interest rates is presumed to have been reached.

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(1) Intra-office Memorandum of John Hancock Mutual Life Insurance Company, dated November 6, 1935.

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The further serious decline in interest rates during 1943 - 1946 renewed interest of insurance companies in this program of building up a strong current position. The Equitable Life of New York has been one of its most active proponents and users. Mr. Thomas I. Parkinson, President of this company, in a speech in late 1945 called attention to the fact that an investor who pays $2\frac{3}{4}$ per cent for a thirty year public utility bond will find that he has lost about fifteen points in five years if the interest rate then goes to $3\frac{1}{2}$ per cent; (1) during 1946 it has been reported that Equitable's policy called for a big increase in investments in short-term Governments. The Prudential, New York Life and John Hancock are among the other larger companies which adapted a similar policy during 1946.

5. Slight Deterioration in Quality of Investments

Although, as mentioned earlier in this report, insurance companies have been forced by circumstances to put a smaller percentage of their investment monies into the higher grade bonds, the comparison of acquisitions by the three larger life companies in 1940 and 1945, of bonds offered publicly, and of holdings of rated corporate bonds by the John Hancock for the same years, shown in Figure twenty, seems to indicate that in general the portfolios

(1) Thomas I. Parkinson, Low Interest Rates and Public Welfare op. cit. p. 2364

QUALITY OF BOND ACQUISITIONS AND HOLDINGS - 1940 AND 1945

(PERCENT OF CORPORATE BONDS)

(FIGURE 20)

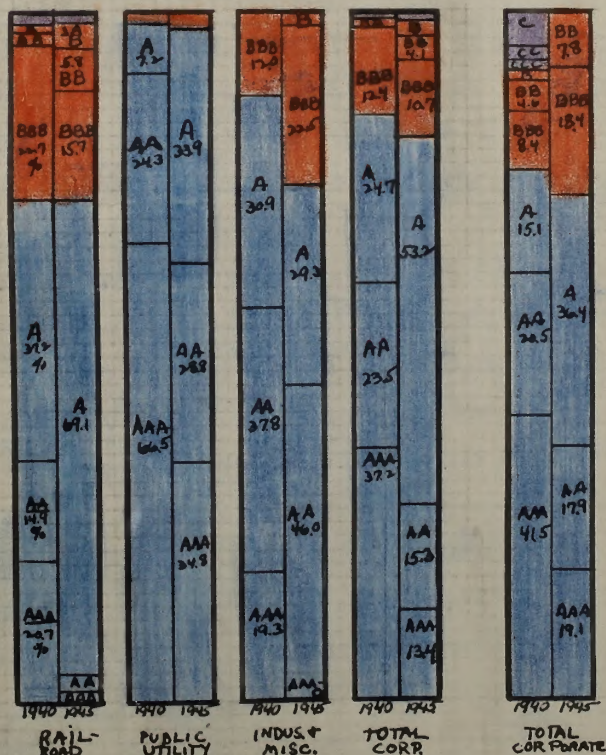
FOUR LIFE COMPANIES

ACQUISITIONS

METROPOLITAN, PRUDENTIAL
AND EQUITABLE, COMBINED

HOLDINGS

AS AT DEC. 31
JOHN HANCOCK



SOURCE: ANNUAL STATEMENTS OF FOUR COMPANIES
RATINGS FROM FITCH BOND RECORD

of these companies were about as strong, from an over-all quality standpoint, at the end of 1945 as they were five years earlier. In the case of railroad bonds, the three companies acquired fewer "AAA" and "AA" bonds in 1945 than in 1940, but a much larger percentage of "A" bonds so that the total acquisitions of bonds with a rating of "A" or better during the two years was almost identical (72.8 per cent). Moreover, the increase in the proportion of railroad bonds with a quality rating of "B" and "BB" acquired in 1940 was sufficient to offset the decline in "B" railroads, so that the proportion of "CCC" and "CC" bonds was only 1.6 per cent in the two years under review. The picture as far as public utility issues is concerned is very strong in both years, with 97.5 per cent of the acquisitions of bonds in this field in 1945 of "A" quality or better compared with 98.0 per cent in 1940. In the industrial and miscellaneous classification, an increase of purchases of "BBB" and "B" bonds (12.0 per cent in 1940 and 24.7 per cent in 1945) did drive down the proportion of bonds with a rating of "A" or better from 88.0 per cent to 75.3 per cent. This trend in industrial investments, which have been increasing in relative importance, is reflected in the chart covering total corporate bonds purchased publicly, where we see that 81.9 per cent of purchases in 1945 were in the three highest rating groups, as against 85.4 per cent in 1940, a decline of 3.5 per cent.

However, the various grades of bonds in the next major quality grouping ("BBB", "BB" and "B") took up this slack, with the result that there was only a negligible increase in the percentage of bonds purchased below a "B" grade (0.7 per cent in 1940 and 0.9 per cent in 1945).

Thus far we have been considering the quality of new securities added to insurance company portfolios. Another slant on the quality of investments is obtained by studying the total holdings of a typical company on December 31, 1940 and 1945. Two features of the last double bar in Figure twenty seem to stand out. The first is that the portfolio of this company included a slightly smaller percentage of "AAA", "AA" and "A" bonds at the end of 1945 than at the end of 1940, 73.4 per cent against 77.1 per cent. The second is that bonds with a rating of less than "B" (8.5 per cent in 1940) have been cleaned out of the portfolio and replaced by those with "BBB", "BB" and "B" ratings which represented 26.6 per cent of the total holdings at December 31, 1945, compared with 14.4 per cent in 1940 -- an indication of the overall strengthening of this company's investment position.

It should be stressed that all of the above figures regarding the quality of insurance investments are based on the so-called public issues. Ratings on securities bought privately, in general, are not available but, since, as a rule,, the very strict standards outlined in Section II

However, the various grades of bonds in the next major quality grouping ("AAA", "AA", "A" and "B") took up this slack, with the result that there was only a negligible increase in the percentage of bonds purchased below a "B" grade (0.7 per cent in 1940 and 0.9 per cent in 1945).

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It should be stressed that all of the above figures regarding the quality of insurance investments are based on the so-called public issues. Ratings on securities bought privately, in general, are not available but, since, as a rule, the very strict standards outlined in Section II

are applied to them, it seems safe to assume that they add strength, rather than weakness, to insurance company portfolios.

As has been suggested earlier, the slight deterioration in the quality of insurance investments may be attributed to a considerable extent to the need for a more reasonable return on invested monies than has been obtainable from "AAA" securities. The investment situation for the smaller companies has been even more difficult than for the larger ones. With the latter literally "gobbling up" the limited volume of more desirable issues, only the investment "crumbs" have been left for the others. In scraping up these left-overs, it is obvious that some life companies have had to compromise their quality standards in order to find any outlets whatsoever for their investment funds. However, the noteworthy point is not so much that the quality of investments appears to have declined somewhat but that, in the face of the terrific pressure for an ample and reasonable return on invested funds, the deterioration has not been more extensive. Moreover, based on the figures presented above, which it is admitted are very limited in scope, it seems entirely possible that from a long-range point of view portfolios are being strengthened by the gradual elimination of bonds with a rating of "CCC" and lower.

B. Developments Which May Influence Investment Policies and Portfolios in the Future

1. Further Broadening of "Legal" Investment Lists

The future undoubtedly holds in store many changes and developments in the institutional investment field. Without a crystal ball or the mind of a prophet, it is impossible to foretell exactly what the future course and trends will be. However, a few of the possibilities and/or probabilities are worthy of note.

In the first place, the trend of the various States seems to be toward broadening the types of investments which may be made by insurance companies. The predicament of these institutions apparently has been driven home in the minds of the legislators who now are taking action to open new outlets for insurance funds. Massachusetts is considering the advisability of including mortgage bonds of water, gas and independent telephone companies on its list of "legal" investments, as well as a larger range of railroad issues. Connecticut recently broadened its insurance laws to permit its domestic insurance companies to invest 5 per cent of their assets in any type of security, including common stocks, selected by their financial officers and committees. In the real estate investment field, California, Louisiana, Mississippi, New Jersey and New York have adopted provisions permitting companies to acquire and hold real estate as an investment for the production of income,

and it is believed that many other states will follow their lead. All of these various modifications of the statutes indicate that the states are approaching and trying to help solve the investment problems of the insurance companies in a realistic and straightforward manner, and that, as a result, the financial officers of the life companies are going to be able to find adequate and safe outlets for their ever-increasing funds.

2. Improved Rates on Government Securities and Increased Offerings of Long-term Government Bonds

A second possible development which should be mentioned is that continued pressure by institutional investors on the United States Treasury may bring about an improvement in the fiscal policies of the Federal Government. For some time insurance company executives have been attempting to convince the Government that the present low rates are detrimental not only to the insurance companies but also to the general welfare of the country and its people in the long run. These efforts, thus far, have not been particularly fruitful since the Treasury's primary concern seems to be to keep the carrying charges on the present National Debt as low as possible. However, if the battle on this front is supported by research and publicity on the part of the actuaries regarding the intricate role of interest in the life insurance structure, some financial men still feel that it may be possible to break down the Government's

resistance to higher rates. The Treasury "might even see fit to adopt the rather old-fashioned policy of setting the rate on new offerings for the purpose of getting the maximum amount of funds from non-inflationary sources instead of paying the minimum amount of interest". (1) Furthermore, as time goes by, inflationary pressures may force the Federal Reserve System to give up its policy of buying unlimited amounts of Treasury Certificates in an effort to hold the rate on them down. (2) Some financial men believe that, notwithstanding its currently avowed policy, the Treasury eventually "will wish to correct the present unbalance between long and short maturities by the offering of fairly large amounts of long-term securities". (3) Any of these steps will be favorable to and welcomed enthusiastically by the insurance companies.

(1) Murray Shields, Inflation, Interest Rates and Investment Policy. Bank of the Manhattan Company, New York, New York, 1946. p. 15.

(2) Loc. cit.

(3) Loc. cit.

C. Potential Investment Trends

1. More Diversification of Investments

Partly as a result of the changes in state laws and partly the consequence of a more aggressive search for profitable investments, the future should find insurance portfolios more diversified than in the past. As the holdings of Government bonds decrease in relative importance, funds will flow into a wider variety of securities than ever before. Typical of this trend which has already started is the large volume of industrial loans being made by Penn Mutual Life Insurance Company of Philadelphia. In 1941 that company's miscellaneous industrial obligations were \$21,019,000; in 1945 they were \$63,302,300. (1) Mr. William W. Bodine, Penn's financial vice president in discussing this growth explained,

There is a great deal of satisfaction in industrial loans. There is no special pattern -- we just fit the loan to the client like a tailor-made suit....You have to be flexible and provide the right service to the client. (2)

The financing of farmers' cooperative associations may provide further diversification of insurance portfolios. Such associations hold a very important position in the marketing of farm products and the purchasing of supplies

(1) Investor's Reader, October 4, 1946.

(2) Loc. cit.

and have attained considerable prominence in certain parts of the United States. However, since they are mutual organizations which are owned and operated by the members, they present many peculiar financing problems. (1) At least one insurance company (John Hancock) is known to have entered this field already with a sizable loan to a large eastern farmers' cooperative. Others will find it profitable to undertake similar financing.

Another potential investment outlet which will help to implement this policy of greater diversification in portfolios of the life companies will be the securities of the International Bank for Reconstruction and Development which will amount to about \$7,600,000,000 (2) It is estimated that about \$1,000,000,000 of this total will be available to United States investors. (3) Although the laws of many states now preclude investment by insurance companies in securities of the world bank, the Bank itself is sponsoring model legislation in each state to enable financial institutions to invest in its bonds. (4) These securities will be

(1) Twenty-sixth Annual Report of the National Bureau of Economic Research, Inc., New York, N.Y., 1946. p. 68.

(2) Survey of Current Business, February 1946

(3) The Outlook for Interest Rates, op. cit. p. 3.

(4) National Underwriter, October 11, 1946. p. 35.

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(4) National Underwriter, October 11, 1946, p. 36.

backed not only by the obligations of the countries to which loans are made but also by the obligations of the member countries on their capital contributions. (1) Every effort is being made to make the securities of the Bank as attractive as possible both by establishing a reasonable rate and by building up confidence of investors through the pursuit of a sound loan policy.

In addition to loans to the Bank itself, there is also the possibility for private investors to make direct loans to countries holding membership in the Bank. The Articles of Agreement provide that the bank may guarantee, in whole or in part, such loans made through customary investment channels. (2)

2. More Careful Attention to Maturities

During the last few years, most insurance companies have ignored or given only minor consideration to the arrangement of maturities of their holdings. With new offerings running very low in volume and investable funds constantly increasing, the companies have bought almost any sound issue which offered a reasonable return, and gave little or no attention to the matter of staggering maturities. As a result, according to one of the investment officers of one of the larger insurance companies, 75 per cent of the bonds

(1) Report, dated November 1, 1946, of Mr. Collado, U. S. Executive Director of the International Bank.

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now in the portfolio of that company mature more than twenty years from now.

If available investments increase substantially in volume, as it is expected they will during the next few years, serious attention will have to be paid to the matters of matching up maturities with prospective needs for funds or of staggering maturities so that regular amounts will come due at regular intervals. Unless such action is taken, the companies at some future date will find themselves forced with the problem of investing within a short period of time the huge sums realized on the maturity of a large percentage of their holdings. If interest rates and the volume of available investments both happen to be low at that time, the investment difficulties will be aggravated as the various insurance companies make a wild scramble to buy up whatever securities may be offered.

3. Establishment of Reserve for Investment Losses

An actuary has suggested that funds arising from capital gains and interest in excess of what may be considered true interest or compensation for the use of capital should be segregated from the general surplus arising from strictly insurance operations. (1) In recent years, as has been mentioned previously, many bonds have been redeemed at substantial premiums which have given the investors unexpected

(1) Wendell P. Coler, An Actuary Looks at Investments, address before the American Life Convention, Chicago, Illinois, October 1943.

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profits. Many insurance companies have realized other sizable profits by selling totally or partially tax exempt bonds at prices considerably above their costs.

There appears to be a growing conviction that these "windfall" profits plus the portion of the interest charged as compensation for risk of loss of principal should be set aside as a reserve for meeting future investment losses. Although there are no "experience tables" with reference to investment mortality so that it is impossible to determine accurately how large such a reserve should be, conservatism and the part of wisdom seem to indicate that some provision will be made for such rather certain contingencies.

SECTION V

The financial strength and stability of United States life insurance companies is of vital importance to the 100,000,000 and more Americans who are policyholders and beneficiaries of life insurance. (1) Consequently, the amount here set aside for the investment of life insurance funds in United States securities is of great importance.

SECTION V

SUMMARY AND CONCLUSIONS

The cost of insurance protection is not a trifling matter. In this country, life insurance has established a reputation for service and protection which is second to none in the world.

However, during the past decade and a half, many changes have taken place in the life insurance industry. The investment of life insurance funds in United States securities has been reduced from 75% to 50%. The average rate of return on these investments has been reduced from 4% to 2%. The average rate of return on the total assets of life insurance companies has been reduced from 5% to 3%. The average rate of return on the total assets of life insurance companies has been reduced from 5% to 3%. The average rate of return on the total assets of life insurance companies has been reduced from 5% to 3%.

(1) Data from United States Life Insurance Companies, 1930-1935.

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The financial strength and stability of United States life insurance companies is of vital importance to the 100,000,000 and more Americans who are policyholders and beneficiaries of life insurance! (1) Consequently, the utmost care and efficiency must be exercised in the investment of life insurance funds to insure that all contractual obligations of the policies may be met and that the cost of insurance protection is kept to a minimum. As an institution, life insurance has established for itself an enviable reputation and a seemingly unassailable financial position.

However, during the past decade and a half, economic changes which center around the narrowing opportunities for investment in private enterprise and the increased importance of government securities as an investment outlet, have cut drastically the earnings of the domestic life insurance companies. After deducting investment expenses from investment income, the net earnings on investments in 1930 for forty-nine domestic life companies amounted to 5.03 per cent of their mean ledger assets, while in 1945 the corresponding rate was 3.09 per cent, a decline of 40 per cent

(1) Dave E. Satterfield, Jr. op. cit. p. 3

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However, during the past decade and a half, economic changes which center around the narrowing opportunities for investment in private enterprise and the increased importance of government securities as an investment outlet, have cut drastically the earnings of the domestic life insurance companies. After deducting investment expenses from investment income, the net earnings on investments in 1930 for forty-nine domestic life companies amounted to 5.05 per cent of their mean ledger assets, while in 1943 the corresponding rate was 3.09 per cent, a decline of 40 per cent.

(1) I have H. Bettlefield, Jr. op. cit. p. 2

in the productivity of life insurance funds within sixteen years. (1) This drastic drop in interest earnings has not only narrowed the "margin of safety" for insurance companies (ie., the difference between the rate required to maintain reserves and the rate earned) but also has increased materially the financial burdens of the great body of American policyholders by reducing the amount of their dividends and by increasing their premium payments on new contracts. An ever-mounting volume of funds to be invested as a result of an increase of 46 per cent in life insurance in force and of 137 per cent in total assets of the life companies, and the limitation on investment outlets imposed by state laws have served to aggravate the problems and difficulties of insurance companies during the period 1930 - 1946.

The investment portfolios of the life companies have reflected the rapidly-shifting economic conditions as well as the unfortunate developments in the international picture which culminated in World War II. United States Government Bonds, of course, which have been in the lime-light during most of the past fifteen or sixteen years increased from 2 per cent of insurance companies assets at the end of 1930 to 46 per cent at the end of 1945; railroad securities took a sharp nose-dive in popularity, while policy loans and mortgages on both farm and city property, likewise

(1) Loc. cit.

showed a drastic decline in relative importance. Public utility bonds and stocks have just about held their own and industrial and miscellaneous securities have registered definite gains. Preferred and common stocks have won favor in some insurance companies as a means of combatting the downward trend of income received from the old-line investments.

This purchasing of stocks is only one of many aggressive steps taken by investment officers of the life companies in recent years. Interest rates on policy loans have been reduced to attract some of the small loan business which has been going to a large degree to banks and other lending agencies; broadening of legal lists of the states has been sought and, in many cases, won so that new potential outlets for insurance funds, such as income-producing real estate, now are being utilized to an increasing extent; quality standards have been modified slightly to permit acquisition of securities providing a more reasonable rate of return than is obtainable on those at the top of the list; opportunities for private purchases of securities on which a better-than-average rate of interest is paid are being more actively sought by many companies; and Canadian investments have won favor because of the higher coupon rates and the possibility of increasing the return still more if exchange rates between this country and Canada remain in the same relative position as at present.

The future investment policy of the life insurance companies will continue to be influenced by many of the above considerations but emphasis will be placed also on other factors. In the first place, pressure on the United States Treasury for higher rates on government bonds and the re-funding of outstanding short-term obligations which are considered inflationary with long-term securities seems likely to be renewed and increased. Secondly, more careful consideration must be given to quality so that only the securities of corporations most likely to weather the storms and vicissitudes of the economic environment will be added to portfolios. More intelligent diversification of risk should become another of the cardinal principles of investment policy as new types of investments, such as securities of farmers' cooperatives and the International Bank for Reconstruction and Development become available. Furthermore, the notion that "maturity doesn't mean anything any more" which has been prevalent for many years, will need to be replaced by the realization that the practice of staggering maturities will be advantageous and necessary as soon as rates turn upward.

(1) In addition, the prospect of a transition from a buyers' to a sellers' market for funds "suggests that the long-range budgeting and planning of investment needs is essential". (2)

Finally, there appears to be much which can be said in favor

(1) Murray Shields, op. cit. p. 16

(2) Loc. cit.

The future investment policy of the life insurance companies will continue to be influenced by many of the above considerations but emphasis will be placed also on other factors. In the first place, pressure on the United States Treasury for higher rates on government bonds and the re-funding of outstanding short-term obligations which are considered inflationary with long-term securities seems likely to be renewed and increased. Secondly, more careful consideration must be given to quality so that only the securities of corporations most likely to weather the storms and vicissitudes of the economic environment will be added to portfolios. More intelligent diversification of risk should become another of the cardinal principles of investment policy as new types of investments, such as securities of farmers, cooperatives and the International Bank for Reconstruction and Development become available. Furthermore, the notion that "safety doesn't mean anything any more" which has been prevalent for many years, will need to be replaced by the realization that the practice of steering maturities will be advantageous and necessary as soon as rates turn upward. (1) In addition, the prospect of a transition from a buyers' to a sellers' market for funds suggests that the long-range budgeting and planning of investment needs is essential. (2) Finally, there appears to be much which can be said in favor

(1) Murray Shields, op. cit. p. 18

(2) loc. cit.

of a policy of setting aside as a special reserve fund for meeting future investment losses, the capital gains resulting from the redemption of investments at a premium plus interest in excess of what may be considered true interest or compensation for the use of capital. (1)

Competition among insurance companies and other large investors for satisfactory investments -- those offering security of principal and a reasonable rate of return -- seems destined to continue and probably will grow more intense during the coming years. However, as the president of one of the medium-sized life companies puts it:

There are still good investments paying a reasonable return but they are not coming in the door. The insurance company investor must go out and look for them. (2)

Although the challenge to investment officers who are ever conscious of their responsibilities as "trustees" is perhaps greater now than ever before, their reputation, record, and past experience provide a sound basis for believing that the investments of the tremendous institutions which they represent will be administered and managed as efficiently in the future as in the past. Nevertheless, economic conditions may make the yield lower so that increased premiums will have to compensate for low earnings. Thus the insurance companies'

- (1) Wendell P. Coler, An Actuary Looks at Investments, address before the American Life Convention, Chicago, Ill. October 1943.
- (2) National Underwriter, February 21, 1947, p. 14

dilemma becomes increased risk in investments and maintenance of present premium rates, or observance of current safety standards and adoption of higher premium rates. If the former policy is followed, the investment officers of insurance companies who have established an enviable record must be even more efficient in the future than they are now, in order to keep the record of capital losses on investments as favorable as they have been for many decades!

The End

APPENDIX

(TABLE A)

INVESTMENTS OF 49 UNITED STATES LEGAL RESERVE LIFE INSURANCE COMPANIES

-INVESTMENTS-BY CLASSES

Dec. 31	Farm Mortgages	Other Mortgages	Total Mortgages	U. S. Government Bonds
1920	1,127,901,000 (16.3)	1,113,750,000 (16.0)	2,241,653,000 (32.3)	796,697,000 (11.5)
1921	1,320,902,000 (17.7)	1,242,126,000 (16.6)	2,563,028,000 (34.3)	800,006,000 (10.7)
1922	1,455,025,000 (18.0)	1,395,428,000 (17.2)	2,850,453,000 (35.2)	843,642,000 (10.4)
1923	1,664,553,000 (18.9)	1,670,453,000 (19.0)	3,335,006,000 (37.9)	789,479,000 (9.0)
1924	1,805,582,000 (18.7)	2,004,098,000 (20.8)	3,809,680,000 (39.5)	688,167,000 (7.1)
1925	1,885,365,000 (17.7)	2,488,529,000 (23.3)	4,373,894,000 (41.0)	631,615,000 (5.9)
1926	1,951,111,000 (16.5)	3,131,373,000 (26.5)	5,082,484,000 (43.0)	489,190,000 (4.1)
1927	1,977,418,000 (15.1)	3,680,499,000 (28.0)	5,657,917,000 (43.1)	440,599,000 (3.4)
1928	1,955,946,000 (13.3)	4,268,250,000 (29.2)	6,224,196,000 (42.5)	391,871,000 (2.7)
1929	1,926,808,000 (12.0)	4,794,664,000 (30.0)	6,721,472,000 (42.0)	316,350,000 (2.0)
1930	1,883,246,000 (10.9)	5,108,451,000 (29.6)	6,991,697,000 (40.5)	301,400,000 (1.8)
1931	1,832,742,000 (10.0)	5,236,196,000 (28.4)	7,068,938,000 (38.4)	355,533,000 (1.9)
1932	1,706,959,000 (9.0)	5,081,912,000 (26.8)	6,788,871,000 (35.8)	421,209,000 (2.2)
1933	1,506,570,000 (7.8)	4,741,648,000 (24.6)	6,248,218,000 (32.4)	804,867,000 (4.2)
1934	1,191,626,000 (6.0)	4,308,601,000 (21.4)	5,500,227,000 (27.4)	1,737,511,000 (8.6)
1935	989,250,000 (4.6)	3,962,860,000 (18.6)	4,952,110,000 (23.2)	2,722,067,000 (12.7)
1936	868,496,000 (3.8)	3,836,972,000 (16.7)	4,705,468,000 (20.5)	3,691,786,000 (16.1)
1937	813,801,000 (3.4)	3,944,082,000 (16.3)	4,757,883,000 (19.7)	4,363,292,000 (18.1)
1938	800,187,000 (3.2)	4,138,170,000 (16.2)	4,938,357,000 (19.4)	4,646,131,000 (18.2)
1939	790,629,000 (3.0)	4,330,493,000 (16.1)	5,121,122,000 (19.1)	5,062,929,000 (18.9)
1940	788,913,000 (2.8)	4,550,051,000 (16.1)	5,338,964,000 (18.9)	5,492,882,000 (19.4)
1941	802,119,000 (2.7)	4,904,756,000 (16.4)	5,706,875,000 (19.1)	6,414,353,000 (21.4)
1942	788,045,000 (2.5)	5,144,968,000 (16.1)	5,933,013,000 (18.6)	8,739,487,000 (27.4)
1943	740,961,000 (2.1)	5,153,335,000 (15.0)	5,894,296,000 (17.1)	11,697,659,000 (34.0)
1944	698,709,000 (1.9)	5,138,172,000 (13.8)	5,836,881,000 (15.7)	15,275,927,000 (41.0)
1945	666,064,000 (1.6)	5,035,518,000 (12.5)	5,701,582,000 (14.1)	18,951,436,000 (46.8)
1946	670,000,000 (1.5)	5,255,000,000 (12.2)	5,925,000,000 (13.7)	19,875,000,000 (46.0)

Dec. 31	State, County, and Municipal Bonds	††Canadian Government Bonds	††Other Foreign Government Bonds	Total Government Bonds
1920	288,239,000 (4.1)	144,376,000 (2.1)	101,286,000 (1.5)	1,330,598,000 (19.2)
1921	346,961,000 (4.7)	157,349,000 (2.1)	110,648,000 (1.5)	1,414,964,000 (19.0)
1922	348,571,000 (4.3)	191,423,000 (2.4)	84,469,000 (1.0)	1,468,105,000 (18.1)
1923	330,377,000 (3.8)	216,512,000 (2.5)	59,828,000 (0.7)	1,396,396,000 (16.0)
1924	342,697,000 (3.6)	225,044,000 (2.3)	43,124,000 (0.5)	1,299,032,000 (13.5)
1925	354,141,000 (3.3)	246,546,000 (2.3)	37,195,000 (0.4)	1,269,497,000 (11.9)
1926	343,171,000 (2.9)	264,835,000 (2.2)	30,224,000 (0.3)	1,127,420,000 (9.5)
1927	355,708,000 (2.7)	304,408,000 (2.3)	32,624,000 (0.3)	1,133,339,000 (8.7)
1928	412,728,000 (2.8)	337,032,000 (2.3)	35,498,000 (0.2)	1,177,131,000 (8.0)
1929	539,949,000 (3.4)	372,715,000 (2.3)	36,397,000 (0.2)	1,265,411,000 (7.9)
1930	585,213,000 (3.4)	403,956,000 (2.3)	32,829,000 (0.2)	1,325,398,000 (7.7)
1931	693,371,000 (3.8)	441,228,000 (2.4)	31,519,000 (0.2)	1,521,651,000 (8.3)
1932	738,191,000 (3.9)	448,357,000 (2.4)	24,713,000 (0.1)	1,632,470,000 (8.6)
1933	808,590,000 (4.2)	439,898,000 (2.3)	17,029,000 (0.1)	2,070,384,000 (10.8)
1934	1,015,233,000 (5.0)	439,870,000 (2.2)	14,980,000 (0.1)	3,207,594,000 (15.9)
1935	1,169,790,000 (5.5)	469,164,000 (2.2)	13,392,000 (0.1)	4,374,413,000 (20.5)
1936	1,300,221,000 (5.7)	476,874,000 (2.1)	10,628,000 (0.1)	5,479,509,000 (24.0)
1937	1,403,176,000 (5.8)	483,550,000 (2.0)	6,379,000 (0.0)	6,256,397,000 (25.9)
1938	1,497,353,000 (5.9)	499,408,000 (2.0)	7,019,000 (0.0)	6,649,911,000 (26.1)
1939	1,649,661,000 (6.1)	533,483,000 (2.0)	6,183,000 (0.0)	7,252,256,000 (27.0)
1940	1,777,386,000 (6.3)	562,562,000 (2.0)	5,891,000 (0.0)	7,838,723,000 (27.7)
1941	1,696,025,000 (5.7)	625,275,000 (2.1)	5,353,000 (0.0)	8,741,006,000 (29.2)
1942	1,471,508,000 (4.6)	709,164,000 (2.3)	5,221,000 (0.0)	10,925,380,000 (34.3)
1943	1,210,431,000 (3.5)	880,135,000 (2.6)	5,503,000 (0.0)	13,793,728,000 (40.1)
1944	896,340,000 (2.4)	990,083,000 (2.7)	5,838,000 (0.0)	17,168,188,000 (46.1)
1945	570,451,000 (1.4)	1,112,800,000 (2.8)	6,066,000 (0.0)	20,640,753,000 (51.0)
1946	440,000,000 (1.0)	1,227,000,000 (2.9)	8,000,000 (0.0)	21,550,000,000 (49.9)

Dec. 31	*Railroad Bonds and Stocks	*Public Utility Bonds and Stocks	*Other Bonds and Stocks	*Total Bonds and Stocks
1920	1,742,888,000 (25.1)	215,722,000 (3.1)	90,123,000 (1.3)	3,379,331,000 (48.7)
1921	1,718,651,000 (23.0)	223,381,000 (3.0)	99,782,000 (1.3)	3,456,778,000 (46.3)
1922	1,836,122,000 (22.7)	260,928,000 (3.2)	101,587,000 (1.3)	3,666,742,000 (45.3)
1923	1,933,548,000 (22.0)	332,922,000 (3.8)	116,984,000 (1.3)	3,779,850,000 (43.1)
1924	2,109,282,000 (21.9)	447,559,000 (4.6)	135,556,000 (1.4)	3,991,429,000 (41.4)
1925	2,244,553,000 (21.0)	619,455,000 (5.8)	159,630,000 (1.5)	4,293,135,000 (40.2)
1926	2,413,050,000 (20.4)	813,910,000 (6.9)	169,813,000 (1.4)	4,524,193,000 (38.2)
1927	2,561,185,000 (19.5)	1,076,311,000 (8.2)	213,196,000 (1.6)	4,984,031,000 (38.0)
1928	2,738,126,000 (18.7)	1,325,131,000 (9.1)	312,040,000 (2.1)	5,552,428,000 (37.9)
1929	2,848,433,000 (17.8)	1,450,300,000 (9.1)	412,047,000 (2.6)	5,976,191,000 (37.4)
1930	2,946,876,000 (17.1)	1,675,108,000 (9.7)	542,768,000 (3.1)	6,490,150,000 (37.6)
1931	2,995,870,000 (16.3)	1,813,363,000 (9.8)	593,330,000 (3.2)	6,924,214,000 (37.6)
1932	2,939,570,000 (15.5)	1,807,452,000 (9.5)	590,661,000 (3.1)	6,970,153,000 (36.7)
1933	2,888,510,000 (15.0)	1,828,100,000 (9.5)	580,913,000 (3.0)	7,367,907,000 (38.3)
1934	2,912,743,000 (14.5)	1,926,922,000 (9.6)	660,058,000 (3.3)	8,707,317,000 (43.3)
1935	2,875,740,000 (13.4)	2,170,605,000 (10.1)	788,638,000 (3.7)	10,209,396,000 (47.7)
1936	2,933,365,000 (12.8)	2,562,559,000 (11.2)	922,041,000 (4.0)	11,897,474,000 (52.0)
1937	3,030,369,000 (12.6)	2,822,923,000 (11.7)	1,218,569,000 (5.0)	13,328,258,000 (55.2)
1938	2,969,252,000 (11.6)	3,277,069,000 (12.9)	1,300,392,000 (5.9)	14,396,624,000 (56.5)
1939	2,945,906,000 (11.0)	3,773,598,000 (14.1)	1,565,295,000 (5.8)	15,537,055,000 (57.9)
1940	2,993,030,000 (10.6)	4,196,752,000 (14.9)	1,771,639,000 (6.3)	16,800,144,000 (59.5)
1941	2,986,957,000 (10.0)	4,774,219,000 (15.9)	2,068,740,000 (6.9)	18,570,922,000 (62.0)
1942	2,781,410,000 (8.7)	5,043,037,000 (15.8)	2,059,330,000 (6.5)	20,809,157,000 (65.3)
1943	2,750,287,000 (8.0)	5,059,629,000 (14.7)	2,114,834,000 (6.2)	23,718,478,000 (69.0)
1944	2,694,142,000 (7.2)	5,099,455,000 (13.7)	2,137,590,000 (5.7)	27,099,375,000 (72.7)
1945	2,820,810,000 (7.0)	4,947,581,000 (12.2)	2,243,815,000 (5.6)	30,652,959,000 (75.8)
1946	2,790,000,000 (6.4)	5,485,000,000 (12.7)	3,700,000,000 (8.6)	31,525,000,000 (77.6)

(TABLE A - (CONTINUED))

INVESTMENTS—BY CLASSES (Continued)

Dec. 31	Policy Loans and Premium Notes	Real Estate	Collateral Loans	Cash
1920	826,496,000 (11.9)	137,365,000 (2.0)	32,551,000 (.5)	88,867,000 (1.3)
1921	970,148,000 (13.0)	147,162,000 (2.0)	26,415,000 (.4)	87,430,000 (1.2)
1922	1,039,500,000 (12.9)	151,489,000 (1.9)	19,377,000 (.2)	101,643,000 (1.3)
1923	1,102,598,000 (12.5)	158,591,000 (1.8)	14,279,000 (.2)	98,894,000 (1.1)
1924	1,182,408,000 (12.3)	173,394,000 (1.8)	11,975,000 (.1)	99,677,000 (1.1)
1925	1,287,312,000 (12.1)	187,447,000 (1.8)	12,187,000 (.1)	99,605,000 (.9)
1926	1,419,002,000 (12.0)	213,286,000 (1.8)	16,680,000 (.1)	90,282,000 (.8)
1927	1,580,668,000 (12.0)	248,381,000 (1.9)	18,560,000 (.1)	107,529,000 (.8)
1928	1,780,431,000 (12.2)	295,225,000 (2.0)	21,098,000 (.2)	111,743,000 (.8)
1929	2,128,287,000 (13.3)	339,341,000 (2.1)	20,473,000 (.1)	116,318,000 (.7)
1930	2,503,495,000 (14.5)	404,590,000 (2.4)	19,106,000 (.1)	124,472,000 (.7)
1931	3,002,448,000 (16.3)	514,142,000 (2.8)	18,319,000 (.1)	148,421,000 (.8)
1932	3,408,524,000 (17.9)	748,100,000 (3.9)	11,371,000 (.1)	290,649,000 (1.5)
1933	3,422,049,000 (17.8)	1,104,089,000 (5.7)	10,953,000 (.1)	416,478,000 (2.1)
1934	3,302,284,000 (16.4)	1,488,699,000 (7.4)	8,822,000 (.0)	557,666,000 (2.8)
1935	3,188,700,000 (14.9)	1,751,949,000 (8.2)	7,866,000 (.0)	762,186,000 (3.6)
1936	3,058,138,000 (13.4)	1,892,380,000 (8.3)	4,590,000 (.0)	85,839,000 (3.4)
1937	3,044,462,000 (12.6)	1,930,868,000 (8.0)	3,964,000 (.0)	667,316,000 (2.8)
1938	3,038,509,000 (11.9)	1,927,661,000 (7.5)	3,292,000 (.0)	704,119,000 (2.8)
1939	2,898,693,000 (10.8)	1,896,875,000 (7.1)	3,324,000 (.0)	845,339,000 (3.1)
1940	2,748,038,000 (9.7)	1,826,638,000 (6.5)	7,069,000 (.0)	943,779,000 (3.3)
1941	2,582,278,000 (8.6)	1,643,564,000 (5.5)	7,283,000 (.0)	780,797,000 (2.6)
1942	2,363,710,000 (7.4)	1,448,985,000 (4.5)	4,454,000 (.0)	633,936,000 (2.0)
1943	2,086,428,000 (6.1)	1,170,957,000 (3.4)	2,760,000 (.0)	742,965,000 (2.2)
1944	1,871,658,000 (5.0)	922,785,000 (2.5)	1,802,000 (.0)	598,942,000 (1.6)
1945	1,715,666,000 (4.2)	728,796,000 (1.8)	1,371,000 (.0)	615,373,000 (1.5)
†1946	1,635,000,000 (3.8)	625,000,000 (1.5)	5,000,000 (.0)	575,000,000 (1.3)

Dec. 31	Other Assets, Less Assets Not Admitted	TOTAL ADMITTED ASSETS			Ratio of 49 Companies to All Companies
		Of the 49 United States Companies	**Of All United States Companies		
1920	229,709,000 (3.3)	6,935,972,000	7,119,997,000		94.8
1921	209,815,000 (2.8)	7,460,776,000	7,536,497,000		94.0
1922	259,943,000 (3.2)	8,089,147,000	8,632,318,000		93.5
1923	306,377,000 (3.4)	8,787,595,000	9,454,621,000		92.9
1924	363,722,000 (3.8)	9,634,285,000	10,394,034,000		92.7
1925	414,476,000 (3.9)	10,648,056,000	11,537,615,000		92.5
1926	483,353,000 (4.1)	11,829,280,000	12,939,807,000		91.4
1927	534,939,000 (4.1)	13,132,025,000	14,391,851,000		91.2
1928	644,863,000 (4.4)	14,631,984,000	15,961,994,000		91.7
1929	699,710,000 (4.4)	16,001,812,000	17,482,309,000		91.5
1930	713,656,000 (4.2)	17,247,166,000	18,879,611,000		91.4
1931	734,201,000 (4.0)	18,410,683,000	20,159,940,000		91.3
1932	770,381,000 (4.1)	18,988,249,000	20,754,112,000		91.5
1933	689,260,000 (3.6)	19,258,934,000	20,895,726,000		92.2
1934	544,770,000 (2.7)	20,109,785,000	21,843,794,000		92.1
1935	513,021,000 (2.4)	21,385,228,000	23,216,496,000		92.1
1936	556,162,000 (2.4)	22,000,051,000	24,874,316,000		92.1
1937	409,240,000 (1.7)	24,141,991,000	26,249,049,000		92.0
1938	486,234,000 (1.9)	25,494,796,000	27,754,661,000		91.9
1939	544,274,000 (2.0)	26,846,682,000	29,243,411,000		91.8
1940	584,455,000 (2.1)	28,249,087,000	30,802,155,000		91.7
1941	645,218,000 (2.2)	29,936,937,000	32,730,965,000		91.5
1942	690,942,000 (2.3)	31,884,197,000	34,931,411,000		91.3
1943	767,337,000 (2.3)	34,383,221,000	37,766,396,000		91.0
1944	933,995,000 (2.5)	37,265,438,000	41,053,974,000		90.8
1945	1,039,031,000 (2.6)	40,454,778,000	44,797,041,000		90.3
†1946	910,000,000 (2.1)	43,200,000,000	48,000,000,000		90.0

() Ratio of investments in class to total investments.

† Estimated by Life Insurance Association of America from actual data as of October 31.

†† Including securities of all political subdivisions.

* See Table for amounts of stocks included.

** Data, except for 1946, from Life Insurance Year Books of The Spectator Company.

SOURCE: LIFE INSURANCE ACHIEVEMENT IN 1946 - PAUL A. SATTERFIELD, JR.

(TABLE A - (CONTINUED))
STOCKS - BY CLASSES

FORTY-NINE U.S. LEGAL RESERVE LIFE INSURANCE COMPANIES

Dec. 31	PREFERRED AND GUARANTEED				Total
	Railroad	Public Utility	Other		
1920	12,155,000	983,000	355,000		13,493,000
1921	11,372,000	1,176,000	1,119,000		13,667,000
1922	11,834,000	1,138,000	1,686,000		14,658,000
1923	11,967,000	1,828,000	1,090,000		14,885,000
1924	9,653,000	2,185,000	1,623,000		13,461,000
1925	9,801,000	2,248,000	2,000,000		14,049,000
1926	9,902,000	3,022,000	1,543,000		14,467,000
1927	11,969,000	6,695,000	2,649,000		21,313,000
1928	25,547,000	41,598,000	52,331,000		119,476,000
1929	40,110,000	82,264,000	110,344,000		232,718,000
1930	59,762,000	117,663,000	173,959,000		351,384,000
1931	67,500,000	152,386,000	193,104,000		414,990,000
1932	66,996,000	153,764,000	194,522,000		415,282,000
1933	66,150,000	155,481,000	185,853,000		407,484,000
1934	66,301,000	157,198,000	188,482,000		411,981,000
1935	65,693,000	164,232,000	201,517,000		431,442,000
1936	66,538,000	163,077,000	188,067,000		417,682,000
1937	63,087,000	158,198,000	209,458,000		430,743,000
1938	55,265,000	156,354,000	199,163,000		410,782,000
1939	49,761,000	142,992,000	203,236,000		395,989,000
1940	48,347,000	139,929,000	206,042,000		394,318,000
1941	51,739,000	142,932,000	214,169,000		408,840,000
1942	46,148,000	141,607,000	223,975,000		411,730,000
1943	45,722,000	140,536,000	230,339,000		416,597,000
1944	55,620,000	139,511,000	258,887,000		454,018,000
1945	66,677,000	168,712,000	346,837,000		582,226,000
†1946	66,000,000	214,000,000	435,000,000		715,000,000

Dec. 31	COMMON				Total
	Railroad	Public Utility	Other		
1920	23,063,000	11,318,000	33,997,000		68,378,000
1921	17,379,000	10,493,000	27,208,000		55,080,000
1922	17,409,000	7,779,000	27,055,000		52,243,000
1923	16,576,000	6,540,000	34,045,000		57,161,000
1924	17,404,000	5,776,000	35,544,000		58,724,000
1925	17,227,000	6,366,000	48,693,000		72,286,000
1926	17,770,000	6,335,000	51,007,000		75,112,000
1927	13,142,000	5,050,000	48,132,000		66,324,000
1928	18,647,000	5,251,000	29,469,000		53,367,000
1929	24,830,000	8,134,000	55,365,000		88,329,000
1930	24,897,000	10,970,000	59,510,000		95,377,000
1931	26,382,000	12,779,000	61,805,000		100,966,000
1932	24,059,000	12,229,000	62,079,000		98,367,000
1933	23,726,000	12,334,000	62,856,000		98,916,000
1934	22,481,000	12,238,000	62,813,000		97,532,000
1935	22,552,000	14,619,000	61,954,000		99,125,000
1936	20,181,000	19,262,000	66,463,000		105,906,000
1937	19,353,000	21,016,000	61,547,000		101,916,000
1938	21,552,000	22,459,000	68,096,000		114,107,000
1939	22,666,000	24,650,000	74,257,000		121,573,000
1940	23,112,000	25,102,000	80,836,000		129,050,000
1941	16,699,000	26,793,000	80,687,000		124,179,000
1942	19,818,000	26,711,000	84,078,000		130,607,000
1943	19,186,000	25,485,000	84,988,000		129,659,000
1944	18,713,000	29,265,000	90,483,000		138,461,000
1945	18,733,000	29,338,000	102,886,000		150,957,000
†1946	21,000,000	64,000,000	123,000,000		210,000,000

Dec. 31	TOTAL				Total
	Railroad	Public Utility	Other		
1920	35,218,000	12,301,000	34,352,000		81,871,000
1921	28,751,000	11,669,000	28,327,000		68,747,000
1922	29,243,000	8,917,000	28,741,000		66,901,000
1923	28,543,000	8,368,000	35,135,000		72,046,000
1924	27,057,000	7,961,000	37,167,000		72,185,000
1925	27,028,000	8,614,000	50,693,000		86,335,000
1926	27,672,000	9,357,000	52,550,000		89,579,000
1927	25,111,000	11,745,000	50,781,000		87,637,000
1928	44,194,000	46,849,000	81,800,000		172,843,000
1929	64,940,000	90,398,000	165,709,000		321,047,000
1930	84,659,000	128,633,000	233,469,000		446,761,000
1931	93,832,000	165,165,000	256,909,000		515,906,000
1932	91,055,000	163,993,000	256,601,000		513,649,000
1933	89,876,000	167,815,000	248,709,000		506,400,000
1934	88,782,000	169,436,000	251,295,000		509,513,000
1935	88,245,000	178,851,000	263,471,000		530,567,000
1936	86,719,000	182,339,000	254,530,000		523,588,000
1937	82,440,000	179,214,000	271,005,000		532,659,000
1938	78,817,000	178,813,000	267,259,000		524,889,000
1939	72,427,000	167,642,000	277,493,000		517,562,000
1940	71,459,000	165,031,000	286,878,000		523,368,000
1941	68,438,000	169,725,000	294,856,000		533,019,000
1942	65,966,000	168,318,000	308,053,000		542,337,000
1943	64,908,000	166,021,000	315,327,000		546,256,000
1944	74,333,000	168,776,000	349,370,000		592,479,000
1945	85,410,000	198,050,000	449,723,000		733,183,000
†1946	89,000,000	278,000,000	558,000,000		925,000,000

SOURCE: LIFE INSURANCE ACHIEVEMENT IN 1946 - DAVE E. SATTERFIELD, JR

INVESTMENTS OF LIFE INSURANCE COMPANIES

1930 - 1945

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